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THE IMPACT OF U.S. TARIFFS ON EUROPEAN EXPORTERS: STRATEGIC RESPONSES AND MARKET REORIENTATION

**L'Impatto dei Dazi Statunitensi sugli Esportatori Europei: Risposte
Strategiche e Riorientamento del Mercato**

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ABSTRACT

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The Impact of U.S. Tariffs on European Exporters: Strategic Responses and Market Reorientation

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Keywords: Tariffs; European exporters; U.S.A; Trade policy uncertainty; Strategic responses; Firm heterogeneity.

Abstract:

The main purpose of this thesis is to examine tariff-related shocks and trade policy uncertainty affecting European exporting companies, in terms of market performance and strategic responses. The thesis focuses on Italian companies as an illustrative case within the broader EU27 context. Tariffs are not treated only as cost shocks, but also as part of a wider uncertainty and institutional environment that may influence firms' commitment to the U.S. market and shape responses across sectors and firms. In this perspective, institutional distance and liability of foreignness are also considered as complementary factors that may increase the complexity of operating in the U.S. market.

The research uses a mixed-method approach. The quantitative analysis relies on monthly Eurostat export data, measured in values and quantities, for Italy and the EU27 toward the United States and to the world. Two periods are analyzed: 2016 vs. 2017–2020 and 2024 vs. 2025. The study combines descriptive analysis with a comparative DiD model, using

pharmaceuticals as the control sector. The qualitative part is based on semi-structured interviews with Italian food and wine companies, analyzed through the Gioia framework.

The quantitative results show that tariff-exposed sectors were relatively less oriented toward the U.S. market than pharmaceuticals, especially in terms of export quantities. However, the data do not indicate a general collapse of exports, and the recent pattern is broadly similar for Italy and the EU27. The qualitative findings show heterogeneous firm responses. Tariffs affected margins and profitability, while uncertainty influenced planning, investment timing, and attention to alternative markets. Firms mainly adopted strategic moderation rather than withdrawing from the U.S. market, which is still considered strong and attractive. The interviews also highlight regulatory and operational frictions, including documentation, labeling, customs procedures, and dependence on local intermediaries, which are consistent with the broader international business perspective on institutional distance and liability of foreignness.

In summary, tariff-related shocks affected exporters through cost pressure, uncertainty, bargaining difficulties, and institutional and regulatory frictions. The findings suggest that policy support should not be limited to tariff-related costs, but should also address market-development efforts, information access, distributor relationships, regulatory constraints, and firms' ability to adapt to changing institutional conditions in foreign markets.

Abstract in italiano:

L'obiettivo principale di questa tesi è esaminare gli shock legati ai dazi e all'incertezza della politica commerciale che colpiscono le imprese esportatrici europee, analizzandone le performance di mercato e le relative risposte strategiche. Lo studio si concentra sulle aziende italiane come caso esemplificativo all'interno del più ampio contesto dell'UE-27. I dazi non vengono considerati esclusivamente come uno shock dal lato dei costi, ma piuttosto come parte di un più vasto clima di incertezza e di un complesso quadro istituzionale, in grado di influenzare l'impegno delle imprese nel mercato statunitense e di modellarne le reazioni a seconda del settore e delle specificità aziendali. In quest'ottica, la distanza istituzionale e lo svantaggio derivante dall'essere percepiti come stranieri (*liability of foreignness*) sono visti come fattori complementari che accrescono la complessità di operare sul mercato americano.

La ricerca adotta un approccio basato su metodi misti. L'analisi quantitativa si avvale dei dati mensili Eurostat relativi alle esportazioni (misurate in termini di valore e quantità) per

l'Italia e l'UE-27, sia verso gli Stati Uniti sia a livello globale. Sono stati presi in esame due orizzonti temporali: 2016 contro 2017-2020, e 2024 contro 2025. Lo studio affianca a un'analisi descrittiva un modello comparativo Difference-in-Differences (DiD), utilizzando il settore farmaceutico come gruppo di controllo. La componente qualitativa, invece, si fonda su interviste semi-strutturate condotte con aziende italiane del settore agroalimentare e vitivinicolo, i cui risultati sono stati analizzati seguendo la metodologia di Gioia.

I risultati quantitativi rivelano che i settori esposti ai dazi hanno mostrato un minore orientamento relativo verso il mercato statunitense rispetto all'industria farmaceutica, soprattutto per quanto riguarda i volumi esportati. Tuttavia, i dati non evidenziano un crollo generalizzato delle esportazioni e le tendenze più recenti risultano sostanzialmente simili sia per l'Italia che per l'UE-27. I riscontri qualitativi mostrano una notevole eterogeneità nelle reazioni aziendali. Mentre i dazi hanno inciso sui margini e sulla redditività, l'incertezza ha condizionato la pianificazione, le tempistiche degli investimenti e l'apertura verso mercati alternativi. Piuttosto che ritirarsi dal mercato americano, considerato ancora solido e altamente attrattivo, le imprese hanno adottato un approccio di moderazione strategica. Le interviste portano inoltre alla luce attriti normativi e operativi, legati in particolare alla documentazione, all'etichettatura, alle procedure doganali e alla dipendenza dagli intermediari locali. Tali aspetti sono pienamente coerenti con la più ampia prospettiva del business internazionale legata ai concetti di distanza istituzionale e di *liability of foreignness*.

In sintesi, gli shock legati all'imposizione dei dazi hanno colpito gli esportatori attraverso una maggiore pressione sui costi, un diffuso senso di incertezza, crescenti difficoltà negoziali e attriti di natura istituzionale e normativa. Questi risultati suggeriscono che le misure di sostegno pubblico non dovrebbero limitarsi a compensare i costi generati dalle tariffe doganali. Al contrario, le politiche a supporto dell'export dovrebbero agevolare le aziende nello sviluppo commerciale, nell'accesso alle informazioni, nella gestione delle relazioni con i distributori, nel superamento dei vincoli normativi e nella capacità di adattarsi ai continui mutamenti del quadro istituzionale nei mercati esteri.

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DECLARATIONS

Turnitin

The originality of this thesis has been reviewed with the Turnitin similarity checking service.

AI usage

The author of the thesis, Stefano Palombizio, used the following AI-tools during the preparation of the thesis:

1) ChatGPT

- a) Purpose of use: ChatGPT was used as a support tool for language refinement, structuring ideas, methodological reflection, support in drafting and refining the structure of the thesis, preliminary source identification, understanding academic papers, summarizing and explaining relevant studies, feedback on the author's own analysis results, table creation, source-management support, assistance in abstract preparation, revision, and feedback on the clarity and coherence of the thesis.
- b) Explanation of the use of the tool: ChatGPT was used to receive feedback on thesis structure, logical flow, academic wording, and grammar. It supported the author in summarizing and explaining relevant academic papers and studies and organizing methodological aspects of the research. It was also used to receive feedback on the quantitative analysis conducted in R and on the interpretation of the related results. In addition, ChatGPT supported the author's understanding of the Gioia framework and provided feedback on the organization of the qualitative analysis results. ChatGPT was also used to support the drafting and refinement of the thesis structure across different chapters, preliminary source identification, and APA-style referencing checks, based on my own draft it assisted in the preparation of the abstract. Finally, it supported the revision of the thesis and helped the author reflect on how to restructure parts of the work after receiving comments from the supervisor. All sources, analyses, interpretations, and final textual decisions were reviewed, verified, and edited by the author.

2) Gemini

- a) Purpose of use: Translation
- b) Explanation of the use of the tool: Used to translate some part of the text from Italian to English.

3) Claude

- a) Purpose of use: Table creation, feedback
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4) Grammarly

- a) Purpose of use: grammar correction and clarity improvement
- b) Explanation of the use: The tool corrected several errors and improved the clarity.

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- a) Purpose of use: Translation
- b) Explanation of the use of tool: Used to translate text from Italian to English, and as a support to understand papers written in English.

Responsibility

The author, Stefano Palombizio, takes full responsibility for the content of this thesis and has reviewed and edited the content generated by the possible use of AI tools.

1 Introduction

1.1 Background

In modern times, international trade has been disrupted by the introduction of new tariffs by the American administration, especially with regard to European Union countries (Boston Consulting Group, 2025). The sectors most affected are aluminum, steel, and agri-food (Shi, 2025). All this has led to changes in trade policies, increasing uncertainty, and market volatility. In addition, competitive conditions have changed in the United States, where higher import costs are being recorded, altering price structures and inevitably changing the strategies of European exporters. Existing studies show that tariffs lead to significant adjustments in trade flows and corporate behavior. This leads to uncertainty about measures that may be introduced in the future, access to markets, and increased costs (Amiti et al., 2019; Fajgelbaum et al., 2020). In this scenario, companies find themselves directly pursuing alternative international strategies to maintain competitiveness in a trading environment where uncertainty is growing.

US trade policies are of utmost importance to world trade, and in particular to European companies, given the characteristics of their production systems. In fact, the commercial scene in the United States is dominated by large companies, often multinationals or highly capitalized, whereas in Europe the market consists of small and medium-sized enterprises, which also account for exports (Business and Industry, n.d.). SMEs are characterized by fundamentally distinctive characteristics. Starting with management, which is often family-based, they have access to limited financial resources, little bargaining power, and less diversification of the markets in which they operate. The main consequence of their structure is that they are unable to withstand extended periods of uncertainty and large, sudden increases in costs, and are therefore much more exposed to trade shocks (OECD, 2023). These points are also supported by academic literature, more specifically, that volatility disproportionately affects small exporting companies, where there are increases in fixed export costs and planning becomes complicated, leading to a reduction in incentives to export (OECD, 2017; Bernard et al., 2018). Tariffs represent a clear strategic challenge to reconsider internationalization and competitive positioning strategies.

Apart from the dimension of firm size, the impacts of the U.S. tariff policies show considerable variability depending upon the exposure and sensitivity of the sectors to the U.S. market. The tariff policies have been implemented selectively in specific sectors, like the metals and agri-food sectors, where the level of international competition is high and, in most cases, the profit margins are low (OECD, 2025). The firms in the sectors where the impacts of the tariff policies are more direct would be more likely to experience the impacts of the measures. On the other hand, the firms in the sectors where the impacts of the measures are relatively more indirect would be more likely to experience the impacts due to the increase in uncertainty (Eurochambres, 2026). The variability of the impacts depending upon the sectors implies that the impacts of the U.S. tariff policies cannot be comprehended through the analysis of the trade data, since the strategic constraints and opportunities of the firms depend not only upon the dimension of size but also upon the intrinsic characteristics of the sectors in which the firms operate. The analysis of the institutional and sectoral data reveals that the exposure of the firms to the markets affected by the tariff policies interacts with the characteristics of the firms in determining the strategic responses to the trade policy shocks (OECD, 2017).

Extending the concept of tariffs, we can say that they certainly fall within a larger context, namely that of uncertainty, trade policies, and the imposition of tariffs. This refers not only to their costs but also, more broadly, to their duration, instability, purpose, or escalation. Unpredictability, therefore, leads companies to experience a climate of uncertainty, facing problems in investments or procurement, not knowing whether volumes will be the same, or in long-term international contracts. Existing studies show a sudden reduction in trade following the uncertainty caused by the deployment of tariffs. This leads directly to an increase in perceived risk and an increase in fixed export costs (Handley, 2011; Handley & Limão, 2017). This is why tariffs are defined not only as a barrier to trade but also as a dynamic source of uncertainty that influences companies' expectations and behavior. The reactions of firms can therefore be interpreted from a broader perspective, because uncertainty becomes part of the analysis. This makes it possible to consider not only the immediate effects of tariffs, but also the forward-looking responses that arise when such measures are expected to persist or remain unstable. This broader perspective helps connect macro-level trade policy shocks with firm-level response strategies, which are the central focus of this thesis.

1.2 Statement of the problem

The primary focus of existing literature on trade wars and tariffs mainly concerns the macroeconomic and sectoral effects of these so-called protectionist policies. Therefore, the effects of tariffs on trade flows, prices, welfare, and the reduction in trade volumes are mainly examined. Historically, as studies show, tariffs imposed by the United States have largely fallen on businesses and consumers, due to their effect of increasing (retail) prices and creating market distortions. From this perspective, tariffs are instruments whose effects are measurable, especially in terms of their aggregate effects on imports, exports, and overall economic efficiency. Overall, most of the literature focuses on the macroeconomic effects of changes in trade policy, while the adjustment process on the part of the companies directly affected, i.e., in this case, European exporters, understood as homogeneous actors responding to an external shock, is lacking (Amiti et al., 2019; Fajgelbaum et al., 2020).

At the same time, literature does not do justice to the effects that tariffs cause upstream, compared to those they cause on consumers, meaning all the choices and changes they must implement in their strategy to respond to shocks (Cox, 2021; Benguria et al., 2025). Some of the papers present a summary and unambiguous view of companies' reactions, focusing on standard channels such as price adjustments and volume reductions, without taking into account corporate structure, organization, resource use, and flexibility. As anticipated, reactions differ depending on whether the company is large or small and in the sector, and tend to be heterogeneous (OECD, 2025). More specifically, a multinational company can “protect” itself better by having a larger, more international network and often a broader portfolio. This allows it to move easily from one market to another and reorganize production or the supply chain, cushioning the shock in a cost-effective manner. This contrasts with smaller exporters, who are affected by higher fixed export costs, which limit their exposure to prolonged periods of uncertainty (MSU, 2025). The identified gap thus reflects a lack of evidence from a research perspective in terms of how firms respond strategically to the tariff shock in the U.S. market in an environment in which tariffs also play a role as a source of trade policy uncertainty. As discussed in the background section, the same policy action can have both cost-increasing and uncertainty-increasing effects, and these two factors play distinct roles in shaping firms' strategic decisions. In order to understand why some exporters adjust “easily,” and others suffer losses, reduce their exposure, or exit the market

altogether, it is not sufficient to rely solely on an analysis of trade data. Trade flows can be a useful proxy for identifying that changes do occur. However, they cannot reveal what firms perceive about the shock they face, which constraints become binding in their adjustment process, and which strategic options are available to them. This problem is particularly pressing in the European context because exporters tend to be SMEs that face financial constraints, have lower bargaining power, and pursue less market diversification than larger multinational corporations. In addition, the degree of exposure and sensitivity to the U.S. market varies considerably across sectors, and tariffs have been implemented in a selective manner. Hence, in addition to firm size, the sector in which a firm operates could play a crucial role in shaping the strategic constraints and opportunities that exporters face and, therefore, the strategic responses they adopt.

1.3 Aim of the research and research questions

Overall aim of the thesis.

This thesis aims to explore the strategic behavior of European exporting firms in response to U.S. tariff policies and the concomitant increase in trade policy uncertainty, with particular attention to differences across firms and sectors.

Main research question.

How do European exporting firms respond strategically to U.S. tariff policies and associated trade policy uncertainty?

Objectives.

To achieve this aim, the thesis pursues the following objectives:

- To examine how U.S. tariff policies have affected the export performance of European firms operating in the U.S. market.
- To identify and describe the strategic responses European exporting firms adopt to cope with tariff-related trade policy uncertainty and volatility.
- To assess to what extent exposure to tariff-affected sectors influences firms' strategic responses.

- To explore whether non-tariff barriers and related regulatory frictions represent an additional constraint for European exporters in the U.S. market (as a complementary perspective).

Sub-questions.

SQ1. How have U.S. tariff policies affected the export performance of European firms operating in the U.S. market?

SQ2. What strategic responses have European exporting firms adopted to cope with tariff-related trade policy uncertainty and volatility?

SQ3. To what extent does exposure to tariff-affected sectors influence firms' strategic responses?

SQ4. To what extent do non-tariff barriers and related regulatory frictions affect European exporters' strategic decisions in the U.S. market?

1.4 Methodology overview

To achieve this research goal, this thesis combines quantitative and qualitative research methods in a mixed-methods design, to address the main research question (Creswell & Plano Clark, 2007). The quantitative strand relies on secondary trade data on European exports to the U.S., primarily from official statistical sources such as Eurostat. In contrast, the qualitative strand is based on interview data collected from exporting firms. The quantitative research methods provide a clear picture of the movement of EU exports to the U.S., especially during tariff episodes and periods of high trade policy uncertainty. Especially, the quantitative strand uses secondary trade data to conduct a descriptive and comparative analysis of export performance across time, sectors, and country groupings, with particular attention to changes in export values, quantities, and sectoral exposure during tariff episodes and periods of elevated trade policy uncertainty. This helps to establish patterns in export performance over time and across different sectors, and to identify when and where changes are more pronounced. However, changes in trade volumes do not show how firms perceive the shock, which constraints they perceive as binding, or which strategies appear viable given the structure of the firms. For this reason, the study complements the quantitative analysis with qualitative research methods that investigate firms' strategic

responses to trade policy shocks. The qualitative strand relies on firm-level interview evidence to explore how exporters interpret tariff-related shocks and trade policy uncertainty, and how these are translated into strategic responses such as market diversification, pricing adjustments, sourcing changes, or more cautious investment decisions. In this mixed-methods design, the quantitative and qualitative components are integrated in a complementary manner, with the qualitative evidence used to interpret and contextualize the quantitative patterns. In this study, the two methodological strands are used in a complementary way to address different sub-questions of the thesis. The quantitative strand, based on descriptive statistical analysis in Excel and further analysis in R, is used primarily to address SQ1 by examining how U.S. tariff policies are associated with changes in export performance across sectors, periods, and country groupings. It also contributes to SQ3 by identifying differences in sectoral exposure to tariff-related shocks. The qualitative strand, based on interviews with exporting firms, is used primarily to address SQ2 by exploring the strategic responses firms adopt in reaction to tariff-related trade policy uncertainty and volatility. It also contributes to SQ4 by examining how firms perceive non-tariff barriers and regulatory frictions in the U.S. market. Finally, SQ3 is addressed by integrating both strands, as the quantitative analysis identifies sectoral differences in exposure. In contrast, the qualitative analysis helps explain how such differences shape firm-level strategic responses. This research design is summarized in Figure 1, which illustrates how the quantitative and qualitative strands address different dimensions of the research aim, generate distinct but complementary findings, and are integrated in the final interpretation of the study.

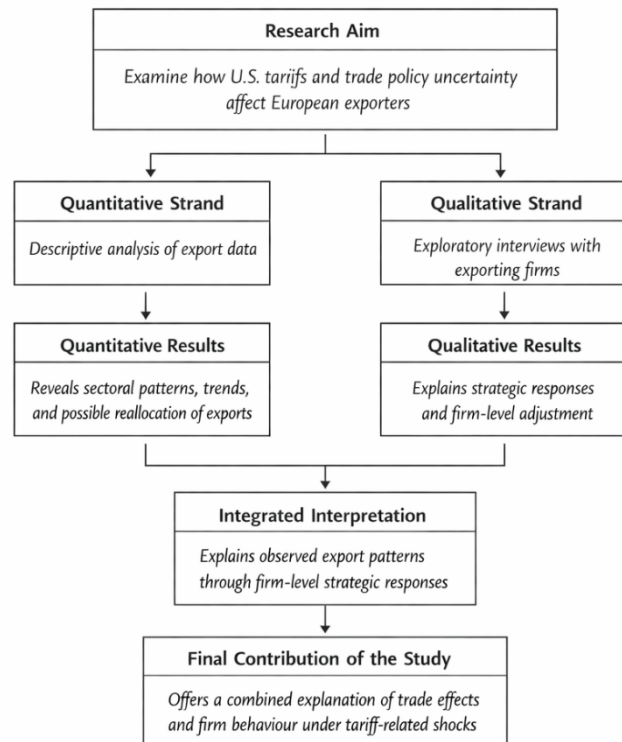


Figure 1 – Research design

1.5 Theoretical framework overview

This thesis examines how U.S. tariffs and trade policy uncertainty shape the strategic adaptation of European exporting firms operating in the U.S. market. In this setting, the phenomenon under study is the effect of tariff-related shocks and uncertainty; the context is European exports to the United States; and the unit of analysis is the exporting firm. The framework draws on a set of complementary theoretical lenses that help explain why firms may respond differently to the same external shock.

First, the framework builds on the idea that tariffs do not merely act as cost-related shocks but can also be viewed as a dynamic source of trade policy uncertainty that affects firms' perceptions of risk in international trade (Handley & Limão, 2017). From this perspective, firm adaptation can be influenced not only by the level of tariffs themselves, but also by the uncertainty surrounding future trade policy conditions, which may discourage firms from maintaining or expanding their presence in the U.S. market.

Second, the framework places emphasis on a heterogeneous-firm perspective, according to which firms differ in ways that shape their trade-related responses, including their size, productivity, and exposure to foreign markets (Bernard et al., 2018; Melitz, 2003). This perspective is important because it helps explain why the effects of tariff-related shocks may diverge across firms, including between smaller and larger exporters.

Third, to incorporate the strategic dimension of decision-making under uncertainty, the framework adopts a real options perspective. When firms face policy uncertainty and decisions that are irreversible or only partially reversible, such as market entry, long-term contracts, capacity investments, or supply-chain changes, waiting may have value, leading to delayed investment and more cautious internationalization strategies (Dixit & Pindyck, 1994).

Fourth, the framework adopts an institution-based view, according to which firms' strategic responses are shaped not only by costs or firm-specific characteristics but also by the broader institutional environment governing market access (Peng et al., 2008, 2009). Institutional distance and the liability of foreignness help explain why operating in the U.S. market may involve additional adaptation costs for European exporters (Kostova, 1999; Zaheer, 1995).

Taken together, these theoretical lenses provide a coherent basis for understanding why tariff shocks may generate not only immediate trade effects, but also more medium-term strategic adjustments that vary across firms and sectors. This positioning is summarized in Figure 2, which presents the main elements of the thesis framework in a simplified way.

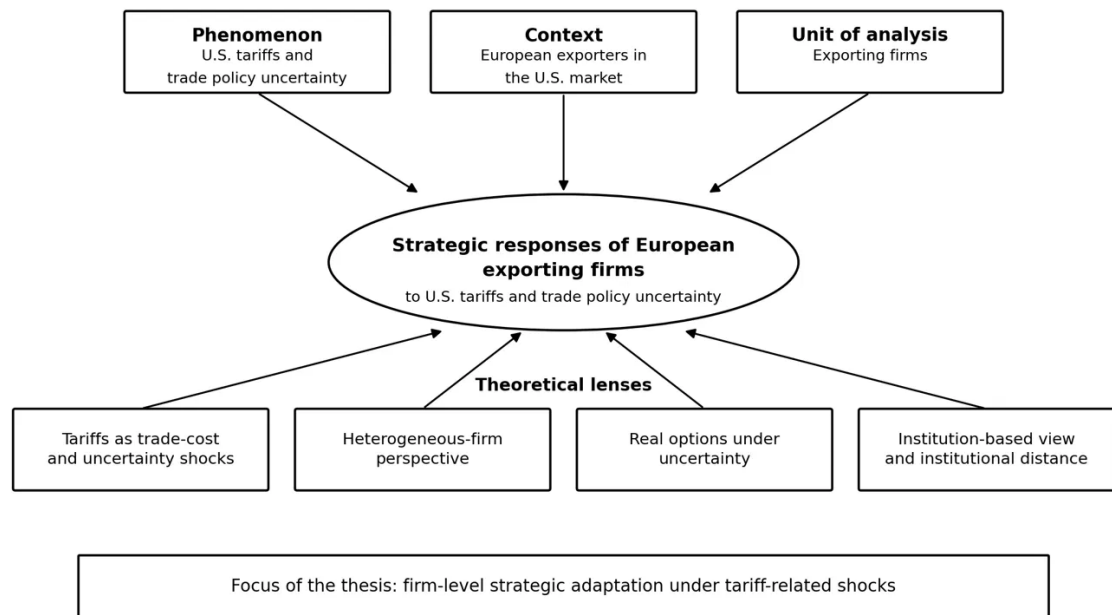


Figure 2 – Conceptual framework

1.6 Delimitations

The scope of this study is defined in such a manner as to facilitate analytical clarity. The scope of the research is set by focusing on European firms whose exports are oriented towards the U.S. market, with Italy being used as an exemplar within the broader European framework. Italy is an appropriate country in this regard because of its high export intensity, coupled with the prevalence of SMEs in the dominant manufacturing and agri-food industries. The research does not set out to determine causal relationships between tariffs in the U.S. market and firm performance; instead, it takes a more descriptive and exploratory approach in determining patterns of strategic response in an environment of trade policy uncertainty. As such, the scope of the research is limited to its quantitative research in determining the correlation between tariffs and export performance indicators, whereas the qualitative research provides an illustrative element of strategic response. The scope of the research also includes the time frame following the introduction of major tariffs in the U.S., allowing for the capture of short- to medium-term effects without extending into the long-term structural impact.

1.7 Structure of the thesis

Finally, the thesis structure is explained below. The Chapter 2 covers an extensive literature review of the main topics of the thesis, namely tariffs, the macroeconomic effects of tariffs, trade policy uncertainty, and business heterogeneity, already attempting to base the theoretical reasoning on the effects from an organizational point of view for exporters. Chapter 3 outlines the research design and methodology, describing in detail the data sources used, the mixed methodological approach adopted, and the criteria that guided both the quantitative analysis and the qualitative survey at the company level. Chapter 4, on the other hand, discusses empirical analysis. It presents a quantitative analysis of trade flows between the United States and Europe, with particular attention to Italy. Chapter 5 uses the interview data to analyze strategic choices, identify common patterns, understand motivations, and assess the effects. Chapter 6 is the discussion where these findings are interpreted in light of the research objectives and existing literature, interpreting the results from a company and sector perspective and highlighting their broader implications. Finally, Chapter 7 concludes the thesis by summarizing the main results, acknowledging the limitations of the study, and outlining potential directions for future research and policy considerations.

2 Literature review

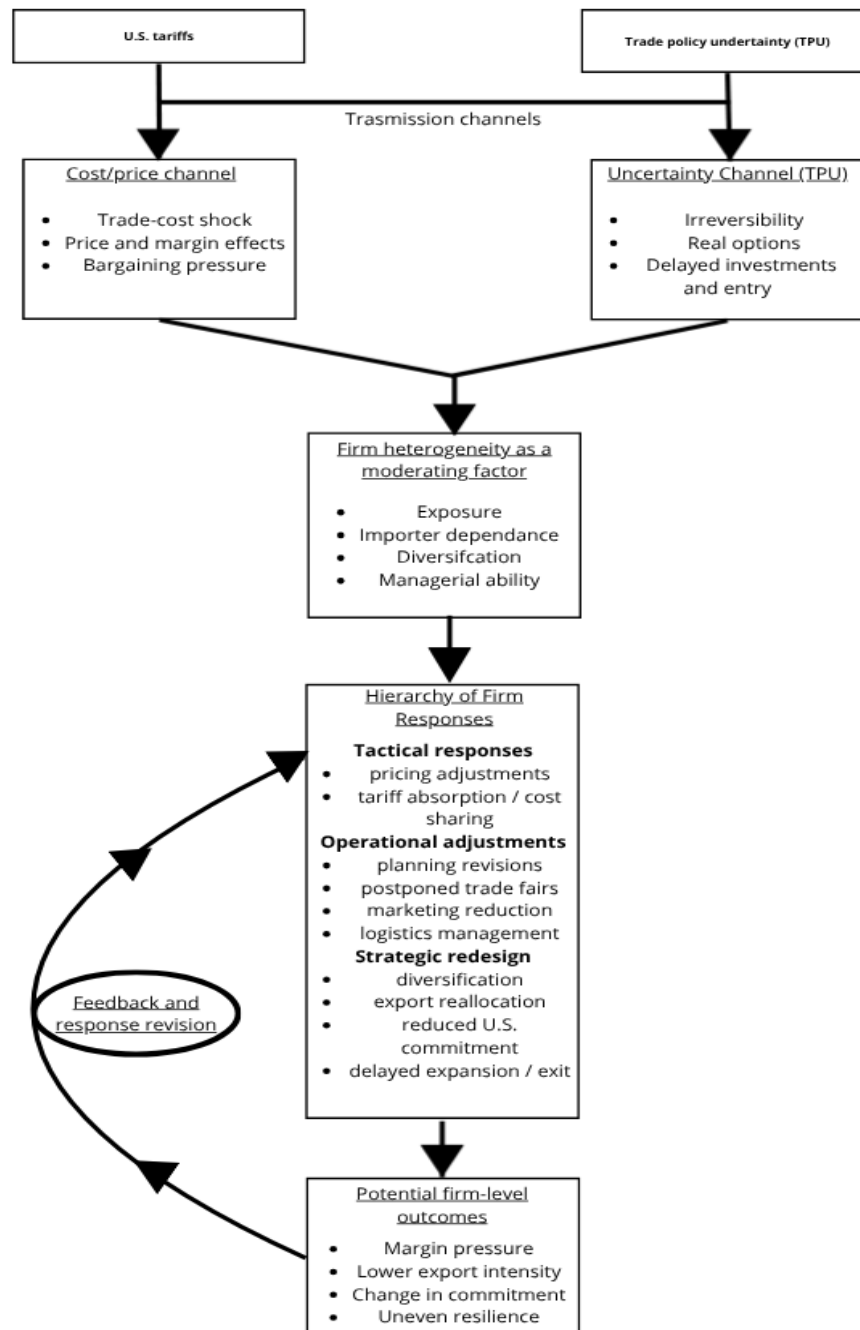


Figure 3 - Theoretical Framework of Firm-Level Responses to Tariffs and TPU

This chapter reviews the main literature related to the research topic. It introduces the key concepts of tariffs and trade policy uncertainty, presents theoretical lenses used in the thesis, and discusses prior empirical evidence on trade shocks, firm heterogeneity, and strategic adjustment. The chapter ends by highlighting the gap in the literature that this study aims to address.

2.1 Definitions and key concepts

2.1.1 Tariffs: definition, forms, and basic incidence

Tariffs are one of the most traditional and widely used trade policy instruments. A tariff, to put it very simply, is a tax imposed on imported goods. There are two types, which can also be combined: *ad valorem* and *specific*. “*Ad valorem*” tariffs are calculated as a percentage of the value of the imported goods (including transport and insurance). They are the most common type, whereas *specific* tariffs are imposed as a fixed amount per unit of measure. (Nevil, 2025) In fiscal terms, they represent revenue for the government that imposes them; however, their purpose is a protective measure aimed at shielding the domestic economy by making foreign goods more expensive. Since they modify consumer prices and are paid by final users, and thus by citizens, they also affect consumption, production, and trade flows in a chain reaction, altering the allocation of resources within the economy.

Tariffs are often considered in empirical cross-country research as dimensions of trade openness. Sachs and Warner (1995) developed a framework that was subsequently expanded and updated by Wacziarg and Welch (2008), which concerned the operationalization of openness through a dummy indicator that includes criteria such as the average tariff rate, the presence of non-tariff barriers, and other factors. In this work, they state that trade policy, and therefore the use of tariffs, is a principal component of a country's external orientation. Wacziarg and Welch (2008), after analyzing data on trade policy and the date marking liberalization, argue that countries that reduced barriers experienced higher average growth and greater investment intensity. Often, however, liberalization phenomena are part of broader political reforms, but this does not diminish the importance of the positive macroeconomic effect.

2.1.2 Tariffs as policy instruments in an open economy: why they matter for firms

From a theoretical perspective, partial economic equilibrium analysis highlights the static effects of tariffs on prices and welfare (Krugman, Obstfeld, & Melitz, 2022). A tariff increases prices in the country that imposes it, reduces the quantity of imports, and transfers surplus from consumers to producers and the government. Although tariff revenue is an internal transfer within the economy, the deadweight loss resulting from the distortion of consumption and production creates a loss of welfare under the conventional hypothesis of a small country. In the reference case, where the country is a small entity that accepts world prices as given, the optimal tariff is zero because any positive tariff creates distortions without improving trade conditions; the logic changes when market power allows a terms-of-trade motive (Broda, Limão, & Weinstein, 2008). At the same time, partial-equilibrium evidence from sectoral tariff episodes illustrates that welfare costs can be large relative to the revenue raised (Flaaen, Hortaçsu, & Tintelnot, 2019).

This welfare logic also matters for firms because it clarifies why tariffs are not neutral fiscal tools. These affect the relative prices and consequently change the demand conditions, input costs, and the competitive environment, thus imposing supply-side as well as demand-side effects on the firms. In the above sense, tariffs can be viewed as policy instruments that affect the firms through the price mechanism, as well as the structure of production costs and the strategies adopted by the firms in production. In the empirical sense, the price channel is consistent with the almost complete border pass-through in the U.S. tariff episode (Amiti et al., 2019), while the cost and strategy channels can be observed in the interaction of tariffs with markups and marginal costs (De Loecker et al., 2016) as well as relocation and supply chain reorganization margins (Flaaen et al., 2019).

Because international participation is concentrated in a limited subset of firms, the same tariff shock is unlikely to translate into uniform outcomes across firms. In particular, exporting and importing decisions involve fixed costs and multiple interdependent margins, markets served, products exported, and sourcing locations, which imply that changes in trade costs can affect not only quantities (intensive margins) but also the set of markets, products, and input sources (extensive margins) (Bernard et al., 2018). Consistently for EU countries, only the most productive firms can typically bear export costs, and those costs are shaped by factors that include tariff and non-tariff barriers and access to finance (ECB, 2019). This

heterogeneity becomes especially relevant in globally integrated sectors: in a tariff-escalation scenario, trade and production decline most in sectors that are highly integrated into global value chains, and switching to alternative suppliers is difficult (OECD, 2018).

2.1.3 Firm Heterogeneity

Firm heterogeneity is a characteristic that serves to complete this chapter on "why tariffs matter." According to Bernard et al. (2018), international trade is not based only on a representative firm. In reality, there is only a narrow group of firms that export, and these firms are usually larger, more structured, and more productive compared to non-exporters. These firms operate across different margins, such as exporting, importing, sourcing materials across various countries, and offering services across multiple countries. In their paper, they also focus on the fact that these margins are interdependent and conditioned by the fixed costs of market entry and input sourcing. This entails that a shock triggers changes, not only in quantities (defined as intensive margins), but also in markets, products, and inputs (considered instead extensive) (Bernard et al., 2018). Regarding EU firms that export, they are noted to be larger in size, more productive, and pay higher wages, always in comparison to firms that do not export. Furthermore, exporting firms, given their caliber, would be the only ones capable of bearing higher export costs due to tariff and non-tariff shocks. Therefore, access to finance as well as the way of reacting, and exposures on different fronts, would be those dimensions that would distinguish and structurally render these firms unequal compared to non-exporters (ECB, 2019).

This heterogeneity explains the differential impact of tariff shocks on firms within a given economic sector. When a distortion of production costs occurs through imported intermediate products, which affects global integration through value chains, there is a differential impact, especially in economic sectors where there is high integration with global value chains, such as those with little possibility of changing suppliers, thus influencing trade and production, as observed by the OECD (2018), which is similar to the multi-margin adjustment mechanisms, as observed by Bernard et al. (2018).

2.1.4 Trade Policy Uncertainty (TPU) as a trade barrier

Tariffs are often considered by traditional international trade theory as static costs that firms can incorporate into marginal cost calculations. However, in today's global context, sudden changes in trade policy, such as the imposition of Section 232 tariffs by the United States (CRS, 2024), suggest that volatility may matter as much as the tariff level itself. The reason is that firms do not only react to the current applied rate: they also react to the perceived distribution of future policy outcomes, which can influence entry and investment decisions even before policy changes materialize (Handley & Limão, 2017). This broader environment of policy-driven volatility is also consistent with the idea that policy uncertainty is a measurable economic force affecting real activity (Baker, Bloom, & Davis, 2013).

The relevance of trade policy uncertainty (TPU) is also mediated by firm heterogeneity, because uncertainty interacts with the same fixed-cost and multi-margin structure that governs trade participation. When exporting and importing decisions are conditioned by fixed costs of entering markets and sourcing inputs, firms with greater scale and productivity are systematically more able to absorb adverse shifts in trade conditions (Bernard et al., 2018), while evidence for EU countries similarly indicates that only a subset of firms can bear export costs that depend on barriers and access to finance (ECB, 2019). In this setting, uncertainty can amplify adjustment frictions by raising the perceived risk of committing to specific markets or input configurations, and policy-driven disruptions can translate into broader adjustment burdens: in the OECD tariff scenario, trade policy changes are associated with additional volatility in labor movement across economies and sectors (OECD, 2018).

The US market is vitally important to European exporting companies, but it is also becoming less predictable. To frame this situation clearly, this thesis adopts a working distinction between risk and uncertainty. Risk refers to situations in which outcomes can be described with known or reasonably stable probabilities, while uncertainty refers to situations where future states and their likelihood are not well pinned down and can shift discontinuously (Knight, 1965). In the context of irreversible decisions, what matters economically is that uncertainty increases the value of waiting for new information (Bernanke, 1980). This logic is central in the real options approach, where postponing action has value when uncertainty is high, and investment is at least partly irreversible (Dixit & Pindyck, 1994).

This distinction matters because firms can often manage risk through hedging and diversification, while uncertainty creates incentives to delay action when decisions involve sunk costs. Bernanke (1980) claims that firms have an incentive to delay investment when there is uncertainty about future returns, specifically, because waiting has value when information arrives over time. Dixit and Pindyck's (1994) framework found something similar: uncertainty increases the option value of waiting and therefore affects the timing of investment and entry decisions.

In trade, this becomes trade policy uncertainty (TPU): uncertainty about the future path of trade policy, including the possibility of discrete adverse shifts in barriers. TPU is therefore not only a background condition; it can also act as a trade barrier by altering incentives to enter and expand in export markets with sunk costs (Handley, 2011). This perspective is consistent with later work showing that policy uncertainty, even without changes in applied tariff rates, can influence trade outcomes through forward-looking entry and participation decisions (Handley & Limão, 2017).

To bridge the gap between theory and empirical observation, it is also necessary to measure the level of stress in the political environment. Baker, Bloom, and Davis (2013) develop an index of economic policy uncertainty that operationalizes policy uncertainty through news coverage, policy-related measures, and forecaster disagreement. Their results support the view that increases in policy uncertainty are associated with declines in investment and employment, which is in line with the broader empirical evidence on uncertainty shocks and real activity (Bloom, 2009).

2.1.5 Institutional environment and institutional distance in International Business

International business decisions are influenced not only by internal resources and market conditions, but also by the institutional context. Multinationals and exporters, unlike domestic firms, operate in multiple parts of the globe, encountering different regulations, legal systems, business practices and social norms. International firms are subject to frequent adaptations for each of the markets that differ from the home market. This makes the context an important determinant of international business decisions.

The institutional environment is defined by the literature on international business as a set of formal and informal institutions that define economic activity and influence the behavior of the company. In fact, institutions define the rules governing the market in which a foreign firm operates. These establish legal frameworks, regulations, norms, accepted business practices and all these can create opportunities or obstacles to international business (Peng et al., 2008). These do not represent only background conditions but are determining factors that the firm takes into consideration to decide market entry, level of resources committed and if and when to expand. Changes in these factors (government or trade policies) can lead to altering the conditions in which the firm competes in international markets.

Although firms belong to the same sector, the institutional context of their countries is not usually the same. As argued by Kostova (1999), countries differ in the institutional profile that embodies the regulatory, normative and cognitive characteristics of their own institutional context. Institutional distance is defined as the distance between the institutional contexts of two countries and helps to understand why a practice or a strategy that works in one context does not necessarily work in another (Kostova, 1999). Recent studies have furthermore underlined the importance of recognizing that institutional distance cannot be considered simply a generic difference between countries, but is rather a multidimensional concept, whose applicability depends on the particular institutional dimensions relative to the phenomenon under examination (Kostova et al., 2020).

Institutional differences have important implications for firms that operate abroad. According to Zaheer (1995), companies operating abroad may incur additional costs compared to local firms due to their lesser familiarity with the market, their lesser integration into local networks, the costs of remote coordination, and cultural, political, and economic differences in the host country. This is known as "liability of foreignness", also known as LOF, and emerges with unfamiliar regulations, different administrative requirements and adapting to local expectations. Institutional distance is a factor that complicates operations in foreign markets, increasing compliance, coordination costs and also uncertainty. These concepts guarantee a basis for understanding that changes in the institutional environment can significantly influence decisions in international markets.

2.2 Theoretical framework

This section outlines the theoretical foundations for interpreting the effects of U.S. tariffs and trade policy uncertainty on European exporting firms. The framework developed in this thesis combines four complementary perspectives. First, tariffs are treated as trade-cost shocks that can affect prices, margins, input costs, and export profitability. Second, trade policy uncertainty is approached through the logic of irreversibility and real options, according to which firms facing sunk costs and partially irreversible decisions may postpone entry, investment, or expansion when the policy environment becomes less predictable. Third, a heterogeneous-firm perspective suggests that these effects are unlikely to be uniform across firms, since adjustment capacity depends on characteristics such as firm size, productivity, diversification, and exposure to foreign markets. Fourth, an institution-based view considers how the broader institutional environment, including regulatory conditions and institutional distance, shapes firms' strategic responses to tariffs and TPU. Taken together, these perspectives provide the theoretical basis for examining why tariff-related shocks may generate differentiated strategic responses across European exporters, with potentially stronger constraints for SMEs.

2.2.1 Static trade effects and welfare logic (partial equilibrium benchmark)

The static partial equilibrium benchmark implies that tariffs tend to generate welfare losses for small countries, because they distort consumption and production without improving the terms of trade. The basic mechanism is that the tariff increases the domestic price of imported goods, reduces import volumes, and shifts surplus away from consumers toward producers and tariff revenue, while creating efficiency losses. This benchmark is useful because it provides a reference case against which further arguments for tariffs, such as market power considerations, can be evaluated. In particular, the “optimal tariff” rationale requires market power and a terms-of-trade channel, so the incentive to set a positive tariff is linked to the ability of the importing country to shift part of the burden abroad and improve its terms of trade (Broda, Limão, & Weinstein, 2008). At the same time, in competitive settings where such terms-of-trade gains are limited, the welfare cost can be large relative to the revenue raised, as illustrated by partial equilibrium evidence from sectoral tariff episodes where

consumer costs substantially exceed the fiscal gains from tariffs (Flaaen, Hortaçsu, & Tintelnot, 2019).

2.2.2 Market power and the “optimal tariff” logic (terms-of-trade channel)

However, some also debate the importance of an optimal tariff level. In fact, significant countries like the United States, which have market power in international trade, can influence the world price of imported goods. A country with strong market power, in this specific case, would create a terms-of-trade improvement for the importing country by imposing a tariff, improving its terms of trade, and shifting part of the burden onto exporting countries. Broda, Limão, and Weinstein (2008) are proponents of this theory, demonstrating empirically that countries with high trade power tend to increase tariffs, as indicated by an inverse export supply elasticity. Therefore, in their view, tariffs are not random but based on the country's position in international trade, and the inverse elasticity of export supply emerges as an important determinant of protection.

This view maintains that, beyond their political dimension, tariffs can have strategic content linked to market power and revenue effects. At the same time, empirical literature emphasizes that trade policies are rarely adopted in isolation. Indeed, Wacziarg and Welch (2008) observe that episodes of trade liberalization tend to coincide with other internal reforms, making it difficult to identify the pure impact of tariff reforms, even if their within-country results suggest that liberalization dates coincide with structural changes in growth, investment, and trade.

Beyond unilateral trade policies, the role of tariffs is also embedded in the context of international agreements and conventions. In fact, the trade regime established after the Second World War, based on the GATT and subsequently on the WTO, sought to reduce tariff barriers through successive negotiations. Although this aspect is not emphasized in Sachs and Warner (1995) and Wacziarg and Welch (2008), the broader decline in tariff rates reflects the trend toward trade liberalization seen worldwide, while the maintenance of tariffs for some countries suggests that protectionism remains a topical issue.

2.2.3 Transmission channels to firm outcomes

This part on tariffs shows us that tariffs are a tool that touches upon various fields, such as fiscal, industrial, and strategic areas for individual countries. For smaller countries, they primarily generate welfare losses in general terms, whereas, on the contrary, they could improve terms for more advanced economies, even if they must take into account possible counterattacks, trade wars, and efficiency losses. This highlights that tariffs can be interpreted through different lenses: a terms-of-trade motive in theory versus the broader empirical literature on distortionary and macroeconomic costs in practice. The thesis, therefore, treats the optimal-tariff argument as a conditional benchmark while relying on empirical work documenting adverse macro-outcomes of tariff shocks. The reduction of tariffs generally brings benefits, openness, and growth to the countries that remove them, which is why tariffs must also be studied from a macroeconomic perspective and not just in isolation, especially in globalized economies: consistent with this broader view, tariff shocks are associated with adverse macro outcomes in cross-country evidence (Furceri, Hannan, Ostry, & Rose, 2018), and policy discussions stress that tariffs affect economies most directly through trade volumes and prices while also generating indirect effects (Kohlscheen, Rungcharoenkitkul, Xia, & Zampolli, 2025).

As for the consequences of tariffs from the point of view of firm outcomes, there are many related channels that can be identified in the literature regarding how tariffs influence prices, cost structure, and firm behavior. First, there is the issue of incidence, which is discussed above, at least in part. Specifically, as documented by Amiti, Redding, and Weinstein (2019), using the example of U.S. tariffs in 2018, tariff changes did not affect export prices to the United States, and the associated tariffs paid so far have been largely borne by U.S. consumers and domestic importers. On the other hand, the retail and welfare consequences of tariffs depend on what happens next after the price formation at the border. In this regard, Flaaen et al. (2019) find that broad-based trade measures could lead to a significant increase in retail prices, and that such consumer consequences may include additional complementary products and domestic competitors, as observed in their study of washing machines.

This interrelationship between prices and costs is tightly linked to the cost and markup channels working within the firm, as seen in De Loecker et al. (2016), where cost savings following trade liberalization in India come primarily from input tariffs. Factory gate prices

decline by less than the cost savings, suggesting imperfect cost pass-through amid rising costs. Here, we see that a tariff shock may affect costs but not translate into price changes because markups may offset some of the variation in input costs.

Another channel linked to the previous one is that trade policy affects the availability of intermediate and capital goods, which in turn influences productivity and factor demand. Topalova and Khandelwal (2011) have found that lowering trade protection not only increases competition (by reducing the output tariff) but also improves access to imported intermediates (by reducing the intermediate tariff), thereby increasing firm-level productivity. To complement this study, Meleshchuk and Timmer (2024) have shown that reducing tariffs on capital goods lowers capital fair prices and increases investment and employment among production workers. However, they find evidence of price transmission from the tariff change to the intermediate prices of capital and non-capital goods. However, only the decline in capital fair prices leads to higher investment and production employment.

2.2.4 Tariff and firm heterogeneity in trade models

When considering trade as an activity carried out by a narrow set of firms, and not by a single average producer, a representative firm framework is no longer sufficient to analyze tariffs. Redding (2010) pays close attention to firm dimensions. In fact, he argues that within the same sector, firms differ in productivity, size, and trade participation. Previous models, on the other hand, could not explain why some firms exported while others did not. This aspect is deepened in the Melitz (2003) model; these asymmetries would have weight, as companies face fixed costs of production and exportation, in addition to variable trade costs. Consequently, a company's profitability depends on productivity; companies that produce above an endogenous productivity cutoff are profitable. Among these, only some can export and therefore cover the additional costs (Melitz, 2003). Trade costs and tariffs are also not just factors that erode profitability, even in an equal and proportional way among firms. Rather, they modify the feasibility conditions for participating in foreign markets, changing the criteria for access, survival, and export eligibility, and thus generating selection effects among firms (Melitz, 2003; Redding, 2010).

From the standpoint of a specific activity conducted by particular firms rather than a general representative producer, it is also necessary to address both the source of differentiation

among these organizations and potential reasons for different reactions to the same external impact. The institutional framework offers such explanations as coercion, mimicking, and normalization of organizations working in the same sphere. According to DiMaggio & Powell (1983), organizations are affected by these forces that create pressures towards convergence and uniformity under conditions of uncertainty. Therefore, it seems reasonable to consider organizations' actions that can be similar not only due to rational motives but also due to external influences. However, such a theoretical approach does not exclude the idea of a certain level of flexibility. For instance, Oliver (1991) extends the institutional argument by stating that organizations cannot be regarded simply as objects of external pressures. Instead, their actions can be influenced by different factors, including the level of dependence on others, concern about legitimacy, internal objectives, and environmental constraints. In regard to tariffs, the concept of heterogeneity in organizations can be applied in two ways. First, as stated in the trade theory, it is determined by productivity. Secondly, it is determined from institutional pressure and may therefore react through acquiescence, compromise, avoidance, defiance, or manipulation.

When this selection mechanism is taken into account, it cannot be assumed that trade policies have uniform sectoral effects. In the presence of firm heterogeneity, tariffs affect the opportunities and profitability of firms with different cost structures and export capacities, since the margin in question depends not only on sales volume but also on firms that manage to maintain their presence in foreign markets from the start. Costinot, Rodríguez-Clare, and Werning (2020) argue that once heterogeneous firms self-select into exporting, trade policies have firm-specific incidence, and the associated normative analysis differs materially from representative-firm benchmarks. In their framework, selection becomes central for the design of trade policy. Yet, the authors do not derive a theoretical rationale for discriminating among domestic exporters through firm-specific export subsidies or taxes. From a positive point of view, this result validates the following more general implication of trade theories that take into account heterogeneous firms: the incidence of tariffs in trade policies must have a redistributive effect among firms, as it affects the profitability map that determines the decision to participate in the market, rather than volumes alone. This result is in line with the broader conclusions of the investigation conducted by Giordano and Lopez-Garcia (2019), according to which evidence suggests that exporting firms are systematically larger and more productive, as they are the only ones that manage to cover the costs associated with accessing foreign markets.

When moving beyond the extensive margin of export participation and considering how tariffs are transmitted to firms, the importance of heterogeneity gains even more importance. Ludema and Yu (2016) say that to analyze pass-through, the standards set by Melitz are too restrictive. This happens because constant marginal costs and CES demand led to having a constant markup and complete pass-through at the firm level. If production quality and a markup that is no longer constant, but variable, are introduced in the study, firms can respond to tariffs in diverse ways. Therefore, by changing prices, markups, quality, and not only adjusting quantities. These responses change systematically with productivity and the scope for quality differentiation. It implies, therefore, that the incidence of tariffs is not exhausted by entry and exit from export markets. This occurs through price differentiation strategies, incomplete cost transfers, quality improvement, and margin compression. Furthermore, more generally, the subsequent approach based on firm heterogeneity has extended this logic by allowing firms to differentiate themselves not only in terms of productivity, but also regarding the number of products, markets, and sourcing relationships, thus intensifying the uneven impact of trade shocks on firms (Bernard et al., 2018). The theoretical mechanisms described above provide the reference context for the empirical literature on firm-level adjustment, resilience, diversification, and the greater vulnerabilities of smaller firms in the face of tariff shocks.

2.2.5 Uncertainty, real options, and hysteresis in export decisions

A central reason uncertainty is not “just noise” is the presence of sunk costs and partial irreversibility. In this section, uncertainty is used in a forward-looking sense as a lack of clarity about the future path of policy and returns. At the same time, volatility refers more narrowly to heightened variability in outcomes over time. This distinction is consistent with the uncertainty-shock framework, where uncertainty is operationalized as a sharp increase in volatility that induces firms to delay investment and hiring decisions (Bloom, 2009). When decisions are at least partly irreversible, uncertainty increases the value of waiting for new information and therefore delays commitment (Bernanke, 1980). If we take the example of a European exporter, German car manufacturers or Italian clothing manufacturers, the decision to export is not without cost. The decision itself requires sunk costs such as research, compliance with US legislative standards, or the creation of a new distribution network, and these costs cannot be fully recovered if the policy environment becomes unfavorable. This

is exactly the type of setting in which the real options approach treats the investment decision as analogous to an option, meaning that uncertainty raises the option value of waiting and shifts the entry trigger upward (Dixit & Pindyck, 1994). In this context, uncertainty about future decisions, such as the news of the imposition of tariffs or the threat of new measures, makes firms more likely to postpone entry or expansion because waiting allows them to learn about policy outcomes before paying sunk costs (Bernanke, 1980; Dixit & Pindyck, 1994).

This concept is further explored in the real options approach discussed in depth by Dixit and Pindyck (1994). They argue that an investment opportunity is similar to a financial call option, which gives the company the right, but not the obligation, to invest at a predetermined cost. In a context of uncertainty, exercising this option, that is, expanding the export base to serve the US market, becomes more expensive because the initial investments cannot be recovered if the US government imposes prohibitive tariffs or changes access conditions abruptly. This is consistent with Bernanke's (1980) point that uncertainty raises the option value of waiting and therefore retards current investment (Dixit & Pindyck, 1994; Bernanke, 1980).

This creates a major obstacle for EU exporters. Dixit and Pindyck (1994) show that when investment is at least partly irreversible, uncertainty raises the value of waiting and therefore increases the entry trigger: firms require a higher expected return before committing resources. Even if the expected return appears sufficient under a simple net present value rule, the option to delay implies a higher hurdle rate, meaning a larger profit buffer is needed to justify the payment of sunk entry costs. Applied to EU-US trade, the implication is that the prospect of discretionary protectionist actions increases the required return for export-market entry or expansion, delaying investment and reducing market participation even when current tariffs are not particularly high (Dixit & Pindyck, 1994; Handley & Limão, 2012).

Hysteresis, or path dependence, is the phenomenon that characterizes decisions to enter or exit a market under uncertainty when there are costs associated with both entry and exit. Dixit (1989) explored it in the presence of a range between entry and exit triggers (a hysteresis band). According to this logic, exporting companies that are already present in a foreign market will tend to remain, thus avoiding losing their sunk investment even if profits decline. Instead, potential entrants may stay out even when conditions look favorable, because the value of waiting is still high. Combined with the real options logic, hysteresis

implies that uncertainty can create persistent trade patterns: “staying in” and “staying out” can both be rational responses depending on a firm’s prior position and cost structure (Dixit, 1989; Dixit & Pindyck, 1994).

Applying this model to trade between the EU and the US suggests a double impact. With sunk entry and exit costs, there can be a “zone of inactivity” in which firms already active in the market may remain even when conditions deteriorate, while potential entrants may stay out even when conditions appear favorable, because uncertainty separates the entry and exit thresholds (Dixit, 1989). For this reason, companies that have already entered the US market may react by showing resilience and remaining in the market to avoid writing off sunk investments. In contrast, companies that were considering entering may treat the threat of tariffs or other measures as a barrier to entry and delay their decision (Dixit, 1989). In such a setting, the risk is that entry is delayed and the firm reallocates resources to destinations where politics is more predictable, which is consistent with trade policy uncertainty acting as an implicit trade cost that discourages participation even without an immediate change in applied tariffs (Handley, 2011).

Trade policy uncertainty modernizes and sharpens these mechanisms by placing uncertainty directly on the evolution of trade barriers. Handley (2011) explains the mechanism through which TPU modifies business decisions by creating a “tariff-equivalent trade cost” on trade, intended as the equivalent of a permanent tariff, when heterogeneous business models with hidden entry costs are integrated. This idea is also taken up and expanded by Handley and Limão (2012), who emphasize that companies are not passive and do not look only at current tariffs, but also at possible future tariffs, so the end of uncertainty can trigger a sharp increase in market entry. This logic is central to the thesis: a company should face a stable, fixed duty rather than face an environment where rates can jump suddenly, because predictability reduces the “option value” of waiting and increases it.

2.2.6 Institution-Based View and institutional distance as a lens for tariff-related shocks

The firms that operate in international markets have behaviors that are typically explained by perspectives either on the characteristics of the industry or on the specific resources of the company. These are useful approaches to explain competitive advantage, but they do not

explain how firms react to external shocks or changes of the context. In fact, companies operating in the same sector can have different approaches in responding to the shock, different strategic responses to changes of regulations or restrictions to trade. The responses are not unique and do not depend on internal capacities or market conditions, but the institutional environment can also play a role.

The institution-based view of Peng et al. (2009) offers a further perspective on strategic choices. Institutions according to them are put as a third component of the strategy tripod, without replacing existing theories. The tripod is further composed of industry-based and resource-based view. According to this framework, international contexts define incentives, limitations, and patterns of behavior, which companies study to formulate their strategies (Peng et al., 2008). Consequently, the institutional context is a fundamental factor besides the market and the resources of firms to understand which strategy was implemented. This is because opportunities and costs can be affected by the institutional context.

In this case, institutions are not only background circumstances, but become the real engines of the behavior of firms. Formal institutions, among which laws, trade norms and government policies, define the legal boundaries within which firms can carry out their international commercial activities, while informal institutions influence corporate operations through norms, conventions and socially accepted behaviors (Peng et al., 2008). When the institutional context changes over time, firms must adjust consequently. Further developments in IBV theory support this argument, suggesting that strategic decisions are influenced not only by economic conditions but also by changes in the institutional context.

This is a particularly interesting perspective to analyze international trade shocks caused by government interventions. The imposition of tariffs can be interpreted as a formal institutional intervention, since it alters the rules governing cross-border transactions. It differs from demand fluctuations or changes in technologies, which do not happen for the same reasons. In this specific case, exporting companies find themselves facing not only an increase in trade costs, but also often the change of regulations in which activities operate. Adding the IBV framework is therefore fundamental to understand the behavior of firms outside of the pure economic aspect.

Peng's framework is also highly relevant when tariffs are combined with political uncertainty. Peng et al. (2008) argue that institutions and their contexts are not static. For

this reason firms must decide how to act at the change of the "rules of the game", or they are uncertain. In this case, firms do not have to only face current policies, like the introduced tariffs. These must also face possible future changes of rules or of introduction of new tariffs or that the framework becomes part of broader political negotiations. Consequently, given that it concerns the stability and predictability of the rules that regulate market access, uncertainty becomes institutional in nature.

Kostova (1999) helps explain why this counts for firms that export and are present on foreign markets. In her framework it is deduced that institutional environments are composed of regulatory, normative and cognitive elements. The regulatory dimension is of particular relevance if one looks at tariff-related shocks, since this is the one that includes laws and rules. These can restrict or expand international trade and therefore the behavior of international firms. Firms in fact must adapt and modify strategy for every change of requests at the border, import rules and tariff changes. It is important to underline that this does not mean that firms suddenly abandon the market but they can mediate other solutions. These may include changes in planning, pricing, resource allocation, or relationships with intermediaries.

Therefore, for European exporters, the United States market will become even more complex not only because of the increase of costs linked to export, but also because of an unpredictable institutional context, within which market access is governed. Import tariffs will have a different impact on firms depending on their degree of exposure to the American market, their level of dependency on importers and their capacity to absorb additional costs or to redistribute them. Therefore, the institutional perspective constitutes a valid complement to the already existing economic approach in the matter of import tariffs. It allows for interpreting tariff-related shocks as institutional shocks, which influence the strategy of the firm both for the consequences on costs and for the increase of uncertainty.

Changes in the rules are of particular importance in the presence of multinational companies, which operate on multiple institutionally different markets. The three dimensions of Kostova (1999) are different from country to country and influence the behavior of a company and the way of how it transfers principles between countries. In the context of the thesis, European exporters are foreign actors in the American market. Therefore, those who must adapt to the American institutional environment, for rules and procedures that differ from the European market.

The concept of institutional distance becomes central at this point. It is defined by Kostova (1999), as the difference between two institutional profiles of two countries. More recently, more emphasis is placed on the fact that distance must be understood in relation to the specific institutional dimension that matters for the phenomenon studied (Kostova et al., 2020). European exporting companies must pay particular attention to regulatory requirements; their changes involve changes of legal frameworks and the introduction of new tariffs. Institutional distance does not refer, however, only to formal rules. In fact, it can be understood as how firms interact with third parties such as importers, or authorities. This is because these relations are guided by typical business principles and practices that are incorporated in the host market.

This framework is useful to explain why the same instrument of tariffs generates different strategic pressures depending on the exporters. According to the institutional perspective (Institution-Based View), the strategic decisions of firms are influenced by the institutional context in which they operate, rather than by corporate capacities alone or by their position in the sector (Peng et al., 2008). Furthermore, as emphasized by Peng et al. (2009), institutions constitute one of the fundamental pillars of strategy definition, together with the sectoral context and corporate capacities. Therefore, since institutional differences increase the difficulty of operating abroad, companies can react by modifying prices, as well as their own commitment on the market.

To add further depth, this section introduces the concept of liability of foreignness. The author Zaheer (1995) argues that foreign companies may incur additional costs compared to local firms. These costs stem from the fact that these companies operate as foreign firms in a foreign market: they are less familiar with the local context, have fewer ties to information and commercial networks, must coordinate operations remotely, and face political, cultural, and economic differences compared to domestic firms. Contextualizing to American tariffs, these could without doubt put more pressure on this liability. Companies would have to sustain greater efforts to interpret new policies and respond, considering that they are in a position of great institutional distance. Consequently, tariffs and TPU not only increase economic costs, but can also aggravate institutional burdens linked to operations abroad.

Overall, the institutional perspective, institutional distance and the “liability of foreignness” contribute to broadening the analysis of tariff shocks from an economic perspective. Peng et al. (2008) observe that the strategy of the firm is determined by the institution. Similarly,

Peng et al. (2009) consider institutions as one of the main bases of strategic behavior. In other words, such shocks are seen as changes in the institutional context, which influence the way in which exporters perceive and develop in the foreign market. However, institutional distance clarifies why the above-mentioned changes can result particularly difficult for foreign organizations because of the differences between national regulations and practices (Kostova, 1999; Kostova et al., 2020). Finally, the “liability of foreignness” provides an explanation for the potential additional expenses of firms in foreign markets (Zaheer, 1995).

Table 1 – Theoretical lenses

Theoretical lens	Key references	Core mechanism	Use in the study
Static trade effects and welfare logic (partial equilibrium benchmark)	Broda, Limão, & Weinstein (2008); Flaaen, Hortaçsu, & Tintelnot (2019)	Tariffs raise domestic prices, reduce import volumes, reallocate surplus, and generate deadweight losses unless terms-of-trade gains are available.	Provides the baseline benchmark for interpreting tariffs as trade-cost shocks and for distinguishing standard welfare losses from more strategic tariff arguments.
Market power and the optimal tariff logic	Broda, Limão, & Weinstein (2008); Sachs & Warner (1995); Wacziarg & Welch (2008)	Large countries may use tariffs strategically if they can shift part of the burden abroad through terms-of-trade effects; trade policy is also embedded in broader liberalization processes.	Helps explain why tariffs may be rationalized differently for large economies such as the United States than for smaller or more exposed economies.
Transmission channels from tariffs to firm outcomes	Furceri, Hannan, Ostry, & Rose (2018); Amiti, Redding, & Weinstein (2019); De Loecker, Goldberg, Khandelwal, & Pavcnik (2016); Topalova & Khandelwal (2011); Meleshchuk & Timmer (2024)	Tariffs affect firms through prices, pass-through, markups, marginal costs, imported intermediates, capital goods, and productivity-related supply-side channels.	Provides the analytical bridge between macro tariff shocks and firm-level outcomes, showing the specific mechanisms through which tariffs can alter firm performance and competitiveness.
Tariffs and firm heterogeneity in trade models	Melitz (2003); Redding (2010); Costinot, Rodríguez-Clare, & Werning (2020); Bernard, Jensen, Redding, & Schott (2018);	Firms differ in productivity, size, export participation, pricing power, and quality differentiation, so tariffs change not only trade volumes but	This is a core lens of the thesis. It supports the argument that tariff shocks do not affect a representative firm but instead generate uneven effects depending on firm

	Ludema & Yu (2016); Giordano & Lopez-Garcia (2019)	also selection, survival, pass-through, and adjustment margins.	characteristics and international integration.
Irreversibility and real options under uncertainty	Bernanke (1980); Dixit & Pindyck (1994)	When decisions involve sunk costs and partial irreversibility, uncertainty increases the value of waiting and raises the threshold for investment or entry.	Provides the main logic for explaining why exporters may postpone market entry, investment, or expansion when trade policy becomes less predictable.
Hysteresis in export entry and exit decisions	Dixit (1989); Dixit & Pindyck (1994)	Entry and exit thresholds diverge under uncertainty, creating a zone of inactivity in which incumbents may remain, and potential entrants may stay out.	Helps explain persistent trade patterns and asymmetries between firms already active in the U.S. market and firms still considering entry.
Trade policy uncertainty as an implicit trade cost	Handley (2011); Handley & Limão (2012); Handley & Limão (2017)	Firms respond not only to current tariffs but also to possible future tariff changes; TPU acts like a tariff-equivalent cost that discourages entry and expansion.	This is the most thesis-specific mechanism. It directly supports the argument that uncertainty itself can alter firm strategy even before tariff changes fully materialize.
Institutional pressures and strategic responses to external shocks	DiMaggio & Powell (1983); Oliver (1991)	Organizations in the same field may face coercive, mimetic, and normative pressures toward convergence, but firms can still respond strategically in different ways depending on dependence, legitimacy, and internal goals.	This lens complements firm heterogeneity by showing that different responses to the same tariff shock may reflect not only economic characteristics, but also institutional pressures and strategic agency.
Institution-based view and institutional distance	Zaheer (1995); Kostova (1999); Peng et al. (2008); Peng et al. (2009); Kostova et al. (2020)	Firms operating across countries face institutional differences that create legitimacy, adaptation, and coordination challenges. Institutional distance influences strategic decisions alongside industry and firm-specific resources.	This lens explains why tariff shocks and trade policy uncertainty affect firms not only through economic costs but also through differences in institutional environments, leading to heterogeneous strategic responses

2.3 Review of prior empirical studies

2.3.1 Macro evidence: output, productivity, labor market

It is useful, as more recent studies do, to evaluate tariffs also from a broader, macroeconomic perspective, rather than looking only at their static partial equilibrium. Furceri, Hannan, Ostry and Rose (2018) conducted an interesting study including 151 countries in the period from 1963 to 2014 and show that tariffs lead to a decrease in domestic output and productivity, especially in the medium term, and are also associated with an increase in unemployment, an increase in inequality, and exchange rate appreciation, while the balance of payments remains fairly unaltered with only small effects. Tariffs, therefore, go beyond trade distortions, also creating macroeconomic costs.

Evidence that tariffs can operate as shocks rather than narrow border measures is also consistent with more recent work focusing on dynamic responses. Boer and Rieth (2024), using a Bayesian SVAR identified through theory-consistent restrictions and narrative signs for the United States, find that unexpected tariff shocks reduce both imports and exports and reduce domestic investment, with adverse effects on GDP; they also find that tariff shocks produce more significant effects compared to TPU shocks and estimate a general equilibrium import elasticity of about -0.8. In a complementary global perspective, Kohlscheen, Rungcharoenkitkul, Xia, and Zampolli (2025) argue that tariffs affect economies most directly through trade volumes and prices, lowering output growth and tending to raise inflation in imposing countries, while also generating indirect effects such as exchange rate shifts, supply chain disruptions, trade diversion, and heightened uncertainty.

2.3.2 Prices and welfare: border pass-through and downstream prices

Tariffs' impact on the economy goes through many channels, and one of these, in particular, is prices. As we saw in the previous paragraph, tariffs tend to depress the economy, reducing production and investment, which is consistent with evidence that tariff hikes are followed by medium-term output and productivity declines (Furceri et al., 2018) and with policy analyses that emphasize the trade volume and price channel as primary propagation mechanisms (Kohlscheen et al., 2025). However, there are also effects at a lower level,

microeconomic effects; understanding them means observing how tariffs are reflected in import prices, domestic prices, and firm markups, and how the final incidence depends on pass-through and firms' adjustment margins (Amiti et al., 2019; De Loecker et al., 2016).

2.3.3 Firm-level mechanisms: markups/costs; intermediates; capital goods; adjustment

In addition to the direct impact of tariffs on prices, it has been observed that trade policy reforms influence firm behavior in terms of markups and marginal costs. De Loecker et al. (2016) examine trade liberalization in India and develop a method for estimating markups and marginal costs based on product-level production data. Their results show the effect on both the marginal cost and the profit margins. The results are relevant in the context of protectionism because when protectionism increases the cost of inputs and the competitive pressures are not strong enough, firms tend to change the markup as a result. In the opposite case, where competition is stronger, markups may be compressed. This logic also helps interpret evidence on price incidence in the U.S. tariff episode (Amiti et al., 2019) and the fact that retail outcomes can be affected by firms' ability to relocate production and reorganize supply chains (Flaaen et al., 2019). This implies that tariffs are reflected not only in border prices but also in pricing strategies and adjustment behavior.

Beyond these pricing margins, it is also important to focus on the part that goes beyond finished products, therefore on the effects on the costs and availability of imported intermediate input goods and on capital goods. In a globalized world, many companies rely on intermediate goods that come from other countries for reasons of economic efficiency or because specialized materials cannot be found at home, and trade policies therefore influence supply chain choices and cost structures in addition to demand-side mechanisms. Goldberg, Khandelwal, Pavcnik and Topalova (2010), examining India's liberalization, show that tariff reductions increase the set of inputs imported by local companies and relate this to firms' ability to expand their scope of product application. They put a highlight on the importance of foreign input goods not only for cost reasons but also for quality and new production possibilities. Topalova and Khandelwal (2011) provide paired evidence. They aim to separate the productivity effects of tariff reductions on inputs and outputs and to identify

stronger productivity gains when input tariffs are reduced. The largest cuts occur in sectors that achieved the highest productivity.

These results are important for the analysis of tariff increases, particularly if these hit capital goods or intermediate goods. If tariff reductions stimulate production by expanding access to inputs and lowering costs, then tariff increases by analogy can raise costs, reduce availability, and cap the company's potential to improve processes, especially for companies that use specialized machinery coming from abroad. The effect of imported capital goods is economically significant in this context. Meleshchuk and Timmer (2024), based on microeconomic data regarding tariff reforms, observe that variations in the cost of capital goods and related production factors influence firms' investment strategies and their use of labor. Therefore, this reinforces the idea that tariffs on capital goods can slow down capital modernization and, in the medium term, the pace of capital intensification and productivity growth.

Taken together, these studies show that the effects of tariff shocks extend beyond trade volumes to firm-level outcomes, operating through supply-side channels. Thereby altering competitiveness through reduced efficiency, lack of technologies, or the inability to update products. In this sense, tariffs are shocks rather than purely fiscal instruments because their effects spill over into import prices, retail prices, and companies' cost structures, and the final impact depends on competition, supply chain flexibility, and firms' ability to adjust markups and reorganize sourcing or production.

The firm-level responses in this thesis need to be distinguished according to the degree of immediacy and strategic depth. The first level is represented by the tactical responses, which are characterized by being quick and easily reversible. In response to tariff pressure, a firm can, in the first level, adjust prices, share the burden with the importer or distributor, or absorb the cost, generating a margin compression. The second level instead classifies the responses in the area of operational adjustments. Some examples are sourcing, change of product configuration, logistics, or supply-chain reorganization. Finally, in the third level, there are strategic redesigns, therefore adjustments that can be in place for longer periods, due to persistent uncertainty or tariffs. Among these, we find changes in market portfolios, relocation decisions, and reassessment of the firm's commitment to particular foreign markets. (Sheffi, 2025) This hierarchy is not meant to be the same for all firms, but it is just a framework to distinguish the types of responses.

2.3.4 Firm heterogeneity, SMEs, and strategic adjustment to tariff shocks

As the literature indicates, the impact of tariffs is not uniform across firms. Firm heterogeneity can be considered a moderating factor. Therefore, responses may be uneven due to differences in production capacity, market exposure, diversification, and adaptability. Especially, the organizational capacity, together with bargaining power, can alter the number of responses and the pressure (Bernard et al., 2018). It is the reason why companies exposed to the same shock can respond not only in different ways, but also in terms of whether the responses are immediate, operational adjustments, or strategic redesigns. Firm heterogeneity can be observed at multiple levels. Analyzing the macro-meso level, it is evident that the tariffs imposed by the United States on the European Union already vary in themselves, across countries, and industries. Specifically, Exposure differs across countries and sectors, with some countries (e.g., Ireland) and specific industries (e.g., car manufacturing) showing higher vulnerability than the EU average (Barata da Rocha et al., 2025). Even within the same sector, and thus at the firm level, it is evident that the effects differ across firms. This is because, within the same sector, firms differ in terms of productivity, export dependence, ability to absorb shocks, or customer mix. Italy is no different from other countries in this respect; indeed, the imposition of tariffs worsens expectations, not only for those selling directly to the United States. The extent of this deterioration varies considerably depending on the degree of export diversification, suggesting that the observed impact of tariff shocks depends not only on direct exposure but also on the degree of firms' integration into foreign markets (Bottoni et al., 2025). In this sense, studies do not confirm that there is a general and uniform reaction among firms to the imposition of tariffs. Although there is generally an average reaction to tariffs, this average masks both vulnerabilities and firms that are highly resilient.

As the literature demonstrates, firms may take different actions in response to tariffs. At the most immediate level, firms adjust prices, trying to absorb tariffs, lowering markups, and looking to share the burden. It is classified as a tactical choice, not just as a common response. As shown by Iseki et al (2026) using shipment-level customs data, exporting firms whose products exhibit high demand elasticity reduced prices more sharply. At the same time, micro, small, and medium-sized enterprises (MSMEs) in the Philippines showed a more pronounced and uniform decline in prices and, on average, fewer exits in the short run

than large firms; however, for highly substitutable products, they appear more vulnerable to exit (Iseki et al., 2026). The latter, on the other hand, made more flexible and product-specific adjustments. This study highlights a crucial point: being vulnerable does not necessarily mean exiting markets more quickly, but in the short term, it may result in a reduction in margins. Ludema and Yu (2016) propose another study that demonstrates and supports this thesis, stating that, at the transactional level, the pass-through is not so uniform across firms. Indeed, when factors such as productivity and quality differentiation between products are taken into account, the pass-through is incomplete or even negative. Conversely, the elasticity of tariff absorption varies with quality and productivity. These studies are therefore crucial in highlighting the differences in responses among firms, which vary in terms of mark-up, positioning, or product quality. It is thus emphasized that tariffs do not elicit a single response from firms, particularly regarding margins. Some firms cut prices, others absorb the costs by reducing mark-ups, whilst others respond by making changes to quality or differentiation. The effects are therefore said to be heterogeneous even among exporters within the same market.

Beyond the most immediate responses, such as price adjustments, the persistence of certain policies may lead the companies to undertake strategic redesign in a more durable way. These are more complex decisions involving the international portfolio, such as market entry and exit. It can also be a reallocation of the export destinations. This is supported by the study by Meng and Wang (2023), which highlights that high anti-dumping duties can reduce entry into certain new markets and increase exit from existing ones (on average). In this case, however, companies that export to multiple countries simultaneously behave slightly differently from others. They usually increase exports to non-targeted markets, particularly high-income countries, sometimes improving product quality. This theory combines two ideas that, taken separately, might seem contradictory. Indeed, whilst it is generally believed, and rightly so, that tariffs lead to a reduction in trade and exit decisions, it is also noted that they can lead to the introduction of new destinations and export growth among firms capable of reallocating resources. A complementary theory, but from a unique perspective, was put forward by Bottoni, Mariz, and Pini (2025). Indeed, their paper shows that with the introduction of the 2025 tariffs, the turnover expectations of Italian manufacturing firms deteriorated. The change in forecasts is partly explained by the degree of export diversification. It is therefore evident that export diversification acts as a stabilizing factor, with diversification within the single European market being twice as strong as that in non-

EU markets. Conversely, firms that do not diversify are found to be more vulnerable. The effects are felt even more acutely by firms that also export to other markets, such as the United States. This is because uncertainty and knock-on effects have a greater impact on firms that export to a single country. Taken together, these studies demonstrate that diversification is not merely a characteristic but an important strategic step and a key element of adjustment mechanisms, thereby enhancing the resilience of firms with broader export portfolios. Moreover, the diversification can also be intended as a response measure, a strategic redesign of the international orientation of the firm.

There is also a factor relating to production structure, imported inputs, and international integration. The ECB conducts a study on heterogeneity but does not analyze tariffs in isolation. It explains that firms with higher margins are larger, more productive, and more concentrated than other firms. Among these, firms that import from abroad appear to experience greater productivity growth compared to firms that rely solely on domestic input. The authors, drawing on Ahn et al. (2016), state that productivity gains are greater when there is a reduction in input tariffs, rather than a liberalization of output tariffs. Where input tariffs stand for taxes imposed on imported raw materials and components used to create a product.

Output tariffs instead refer to taxes imposed on imported finished goods ready for the final consumer. This highlights the importance of inputs in firm performance. This is the factor that allows us to understand the heterogeneity of tariff impacts on firms. In this case, it should be added that vulnerability also depends on the international sourcing network a firm possesses, not merely on whether it exports. These characteristics can determine the capacity of the firm to implement the operational adjustments, in terms of the hierarchy used above. It is intended as changing supplier, make modifications to the product, or reorganize sourcing. In their study, a common pattern emerges regarding firm size, whereby larger, more structured and international firms are better able to absorb shocks, perhaps thanks to higher mark-ups. Thus, it depends on whether it can procure cheaper or higher-quality intermediate goods and whether it has the necessary production base to reorganize production following a shock. In this sense, the empirical literature is increasingly moving away from the rigid distinction between ‘small and large firms’ towards a broader perspective. Productivity, import dependency, market power, and global integration collectively contribute to determining adaptability.

Although firm-level data remain indispensable and irreplaceable, firm-level evidence helps shed light on the broader implications. Autor, Dorn, Hanson, and Song (2013) demonstrate that import shocks entail significant and heterogeneous adjustment costs for workers. Cumulative income losses are greater for those who started from weaker initial conditions, whilst those who started from stronger initial conditions, that is, those who were paid more, generally experience greater mobility between firms and smaller long-term losses. This data, when used judiciously, supports the interpretation drawn from firm-level data. Trade shocks do not impose the same burden on everyone, and the ability to cope with shocks depends crucially on pre-shock conditions.

This logic is analogous to what emerges from firm-level data. In the literature on tariffs, the data suggest the following: Iseki et al. (2026) demonstrate that MSMEs often secure market access through greater price concessions; Bottoni et al. (2025) show that vulnerability is accentuated by a lack of diversification rather than by direct exposure to the US market; Meng and Wang (2023) show that the ability to reallocate exports helps to mitigate the initial shock; and Ludema and Yu (2016) show that productivity levels and quality are important. The picture that emerges is therefore less a simple assertion that SMEs are more vulnerable simply because they are more vulnerable, and more nuanced characterization that smaller or less productive firms may appear more vulnerable because they are more likely to possess a combination of characteristics that make them more vulnerable.

These studies show that companies' strategic responses to shocks are not uniform. In fact, some of these responses are tactical and easily reversible, such as price adjustments and absorbing cost increases. Other responses, however, are more structured, including operational adjustments and strategic redesigns. Examples of the former include changes in sourcing or production arrangements, while the latter include diversification as a response, reallocation, and reassessing commitments. The implementation of these responses is also not uniform but depends on the characteristics of the companies, as their vulnerability or resilience varies. These depend on factors such as managerial ability, portfolio countries, and flexibility.

This is precisely the point that identifies the gap in this thesis. Existing empirical studies already demonstrate that the impact of tariffs is extremely uneven across different firms and that resilience does not depend solely on the firm's administrative size. However, specific evidence on European SMEs, and in particular Italian ones, in the context of recent US tariff

shocks is still limited. This limitation matters because external validity is not guaranteed: tariff and TPU shocks propagate through firm-specific margins of adjustment, whose availability differs systematically across firms, which have also different margins of adjustment (Bernard et al., 2018). In the European context, exporters are a selected group, and their ability to bear trade costs depends on barriers and access to finance, implying that adjustment capacity is structurally uneven even before accounting for sectoral exposure (ECB, 2019). Moreover, exposure is not only a function of destination markets but also of production structure: sectors that are deeply integrated into global value chains and face limited scope to switch suppliers are expected to experience larger trade and production impacts under tariff escalation (OECD, 2018). For these reasons, evidence from other countries or firm populations cannot be assumed to map one-to-one onto European, especially Italian, SMEs facing recent U.S. tariff shocks.

2.3.5 Empirical evidence on uncertainty and TPU: investment, entry, and trade outcomes

We have seen how theoretical models provide a strong basis for a “wait-and-see option”. Empirical work seeks to quantify this effect and show how uncertainty causes companies to cease investing and delay hiring. Bloom (2009) provides a framework for understanding “uncertainty shocks”, that is, sudden and sharp increases in volatility that cause a rapid decline in aggregate output and employment. Bloom (2009) explains this pattern through a temporary freeze in hiring and investment decisions, because the value of inaction increases when uncertainty rises. This mechanism is consistent with the broader idea that uncertainty affects the timing of action, and not only the level of expected returns, especially when decisions are difficult to reverse (Bernanke, 1980).

The European context has also been described through firm-level evidence. Guiso and Parigi (1999) analyzed a sample of Italian companies and found that uncertainty about future demand significantly reduces investment. They also show that the effect tends to be more pronounced for firms with market power and for firms whose investments are considered difficult to reverse (Guiso & Parigi, 1999). This is consistent with the real options view in which irreversibility strengthens the incentive to wait for information before committing resources (Dixit & Pindyck, 1994).

Bloom, Bond, and Van Reenen (2007) went further, analyzing not only the effect on investment but also how uncertainty affects how companies respond to economic signals. They find that higher uncertainty is associated with weaker responsiveness of investment to shocks (Bloom, Bond, & Van Reenen, 2007). In practice, even if conditions improve, firms can still be reluctant to scale up quickly in uncertain contexts, so “caution” acts as a structural brake on responsiveness. This matches the logic that uncertainty delays decisions and can make recoveries slower than what standard models would predict (Bloom, 2009).

To connect uncertainty to measurable indicators, Baker, Bloom, and Davis (2013) developed the EPU index and showed that innovations in policy uncertainty foreshadow declines in activity, including declines in production and employment (Baker, Bloom, & Davis, 2013). Even if the evidence can be interpreted as forecasting rather than purely causal, it reinforces the idea that policy uncertainty is a distinct component of the environment that firms observe when planning investment and hiring. This is consistent with the broader empirical evidence that uncertainty shocks are associated with delayed investment and employment decisions (Bloom, 2009).

In international trade, TPU provides a more targeted lens. Handley and Limão (2017) show that reductions in policy uncertainty alone, without changing tariff rates, can be enough to trigger trade. They illustrate this using China’s accession to the WTO as an example of how removing the threat of adverse tariff shifts increases trade (Handley & Limão, 2017). For the purposes of this thesis, the opposite implication is of primary importance: if reducing uncertainty promotes trade, then reintroducing uncertainty through discretionary actions and episodic threats can limit trade by inducing a wait-and-see approach. This channel is also consistent with the idea that policy uncertainty is associated with weaker real activity and investment planning (Baker et al., 2013).

Handley (2011) provides an additional firm-level perspective that fits this logic by interpreting TPU as a tariff-equivalent trade cost on trade that can be equivalent to a permanent tariff when entry costs and heterogeneity are taken seriously (Handley, 2011). In this thesis, this mechanism suggests that persistent TPU may affect not only market entry, but also firms’ willingness to expand or maintain commitment in an uncertain foreign market. This includes delayed entry, postponed expansion, reduced commitment, or, in more severe cases, market exit. These responses therefore fall mainly into the categories of operational adjustment and strategic redesign. This interpretation is consistent with the

mechanisms identified by Handley (2011) and Handley and Limao (2012) and combines them with the reallocation logic of the previous section. Also, Handley and Limão (2012) highlighted something consistent with the topic; they emphasize forward-looking entry decisions under policy uncertainty. Their study shows that when uncertainty ends, the number of firms entering the market increases sharply, suggesting that uncertainty itself was acting as a barrier to participation (Handley & Limão, 2012).

Taken together, these studies support a coherent picture. At the micro level, uncertainty increases the value of waiting and raises the entry trigger for decisions that entail sunk costs (Dixit & Pindyck, 1994), which is why exporters may delay expansion even when current tariffs are not prohibitive. At the macro level, uncertainty shocks can generate contractions in hiring and investment well before policy changes fully materialize (Bloom, 2009), meaning that the cost of protectionism may be felt long before a single container is taxed at a port. Moreover, the duration of TPU is relevant because persistent uncertainty can shift firm reactions from short-term caution toward operational adjustment or strategic redesign. In the EU–US context, where political signals can be discontinuous, TPU is therefore not only a background condition but a mechanism that can reduce market participation and reshape the timing of trade flows (Handley & Limão, 2017).

2.3.6 Synthesis, gap, and hypothesis

As summarized in Table 2, the literature reviewed above provides a coherent picture in which tariffs have static welfare implications in a partial equilibrium benchmark, can be rationalized through market power considerations in terms-of-trade logic, and empirically behave as macroeconomic shocks that propagate through output, productivity, unemployment, and prices. In parallel, micro evidence shows that the incidence of tariffs can be close to complete at the border, with substantial effects on retail prices and welfare, while firm-level mechanisms operate through markups and marginal costs, through access to imported intermediates and capital goods, and through strategic adjustment margins such as supply chain reorganization and production relocation.

Moreover, the presence of firm heterogeneity as well as trade policy uncertainty complicates the translation of the impacts of tariffs via these channels into outcomes. Firm heterogeneity means that tariffs and trade shocks do not have any effects on a typical exporter because

exporting is done by only some firms, while their productivity, size, and other characteristics matter, meaning that slight variations in trade costs can cause significant effects on both intensive and extensive margins without being able to generate quantity effects alone. This unevenness, together with differences in production structure and international value chains, makes the ability to respond to trade costs highly dependent on firm-level specifics. Trade policy uncertainty, for its part, suggests that the impact of tariff-related policies does not have to be felt until the new tariff actually arrives, since the process of entering and investing in foreign markets includes sunk costs and is partially irreversible. This, in turn, implies that such uncertainty increases the gains from waiting, thereby raising the threshold for entry and exit decisions. In international business, TPU functions similarly to an equivalent trade cost represented by tariffs themselves.

The literature suggests that strategic responses should be distinguished by their strategic depth. Some companies apply only tactical responses, quick and relatively easy to implement, such as adjusting prices or partial tariffs absorption. Others, however, might consider operational adjustments, such as changes to sourcing or logistics. If TPU persists over time, some firms may move toward more durable strategic redesign, where they consider new markets, discuss market exit strategies, or evaluate their desired level of commitment. However, the response levels mentioned are not applicable to all firms in the same way. This is explained by the heterogeneity of firms, which acts as a moderating factor. In fact, firms differ from one another; they have varying degrees of diversification, capabilities, flexibility, and levels of productivity that are not uniform. In this regard, Sheffi (2025) enriches the existing literature by demonstrating how tariff uncertainty may require not only immediate responses in terms of costs and the supply chain, but also a more in-depth reassessment of companies' international operations.

Within the scope of the currently available sources, what remains less clearly pinned down is how these mechanisms translate into systematic differences across European exporting firms, and especially SMEs, in terms of exposure, adjustment capacity, and the level of response adopted, ranging from tactical and operational adjustment to more durable strategic redesign. This gap motivates the empirical part of the thesis, which aims to connect the documented tariff channels and their macro and micro consequences to firm-level outcomes and reactions in the specific context of European exporters facing U.S. tariff shocks.

Based on the reviewed literature, tariffs and the TPU may have an influence on European companies that export to the United States. Given certain characteristics such as corporate structure, managerial capacity to respond to shocks, and the fact that the extent of the impact may vary across firms, it is likely that the effects are not supposed to be uniform. Based on this premise, the quantitative research section of the thesis examines two hypotheses.

Hypothesis 1: Tariff-exposed sectors are expected to demonstrate a relatively weaker export performance in the United States compared to sectors that are less exposed, when tariffs are in effect.

Hypothesis 2: The relatively weaker performance of exposed sectors is expected to be seen in the two main components of export performance: values and quantities. It may appear through lower relative export quantities, lower relative unit values, or both.

The qualitative component, on the other hand, does not aim to test specific additional hypotheses. It has an exploratory nature, seeking to understand firm-level adjustments to tariffs and TPU. The literature also provides a preliminary framework for distinguishing these adjustments into three main categories. Based on the literature review, particularly theories on real options, TPU, and heterogeneity, the interviews investigate how firms respond to tariff pressures and what measures they take regarding prices, commitment, diversification, and other relevant variables.

2.3.7 International Business evidence on institutional distance, foreignness, and strategic responses

As we have seen in the literature review, there are numerous studies that explain that companies that operate abroad have greater difficulties compared to domestic ones. This section instead reviews empirical studies that clarify how institutional differences affect firms in practice.

Zaheer (1995) provides an important early contribution by examining whether foreign firms face a liability of foreignness even in a competitive and integrated industry. Her study on the currency trading rooms of New York and Tokyo demonstrates that foreign companies could perform worse than local firms. This happens since they must face additional costs linked to the scarce familiarity with the context, or to a more limited access to local information networks. This already provides early evidence that the simple fact of being foreign creates disadvantages, even in an integrated market. The problem seems therefore to be broader, it is not only a question of competitive resources but whether companies can operate in the foreign market in an effective way, even if competitors have more knowledge of the institutions and stronger relations.

It can be argued that this is in line with IBV, according to which the strategic decisions of firms depend on the institutional context in which they find themselves (Peng et al., 2008). Based on this approach, the results emerged from Zaheer's study can be considered an empirical proof of the fact that institutions do not constitute simply a background. Instead, they are an integral part of the competitive landscape with which foreign firms must compete. In the context of the present thesis, European exporters that enter into the United States market could find themselves facing a similar logic: even when they possess competitive products and experience in export, they nevertheless remain foreign firms in a competitive market context in which regulation, relationships with importers and policies can involve additional costs.

Kostova's framework is useful for understanding such information, arguing that corporate practices and behavior are deduced from national institutional contexts (Kostova, 1999). Since companies operate beyond national borders, they find themselves facing the problem of the discrepancy between the institutional contexts both country of origin and of the foreign one. Although Kostova (1999) focuses on the transfer of organizational practices within

MNCs, the underlying logic can also inform, with caution, the analysis of exporters operating across different institutional environments. The organizational practices that worked well in the country of origin or in a European country might not necessarily adapt to the institutional context of the United States.

In general terms, also the empirical studies on LOF tell us that domestic and international companies could respond in a different way to shocks. The relevant shock may therefore extend beyond tariffs themselves. They could clash with a great institutional burden in the phases of interpretation or negotiation when there is an important change. It could furthermore contribute to explaining that companies do not respond with radical changes but with cautious adjustments. Therefore, not exiting in a rush from the American market but diversifying, reducing commitment or using other similar tactics.

The second strand of research places the accent on the impact of institutional distance on the performances and survival of foreign firms. This strand of research is particularly useful, since it shifts the attention from the mere existence of the costs associated with the status of foreign firm to the circumstances in which the institutional distance becomes more or less burdensome. In other words, it empirically confirms the concept suggested by Kostova (1999), according to which the institutional distance between the contexts of the country of origin and of the host one can influence the international activities of the firm. Furthermore, this strand of research acts as a complement to the Institution Based View, since it illustrates empirically that the institutional context influences not only the strategy, but also the performances of the firm (Peng et al., 2008).

Gaur and Lu (2007) examine a sample of 20,177 Japanese foreign investments across 52 countries. They study how institutional distance, ownership strategy and the host country influence survival in the country. The result is that there is not a simple linear effect. They instead identified an inverse U-shaped relationship. They tell us that where institutional distance is moderate one can still find opportunities, but where it is high instead, survival is more difficult (Gaur & Lu, 2007). It is an interesting cue for reflection, it shows us that in some cases it can create opportunities, but beyond a certain limit the costs (of adaptation or coordination) exceed the benefits. The same study makes another important discovery, that is that strategic responses depend also on governance and control. Where institutional distance is high, subsidiaries have more chances to survive if the parent company has high levels of ownership. Although it is not directly applicable to exporting companies, the

mechanism is very relevant. Probably the subsidiaries may benefit from tighter parent control. It can translate for European exporters, even if not directly, into a greater attention to the choice of importers, of contractual agreements, especially in the presence of large regulatory changes.

Shirodkar and Konara (2017) deepen this analysis by examining 10,562 firms operating in 17 emerging markets and coming from 80 countries of origin. The main discovery is that institutional distance negatively affects the performance of subsidiaries in emerging markets. Underlining the importance of institutional distance, not only as a cultural factor but as a determining factor that can lead to a reduction of performance. Still in their study it is deduced that it does not always translate into lower performances, but there are factors like time and integration that can change the scenario. In fact, when companies have partial ownership and for firms with greater experience in the host country the negative effect is weaker.

In other words, these studies demonstrate that greater institutional distance manifests itself through a greater lack of familiarity, greater coordination problems and the necessity to dispose of local information. This means that the reactions of European exporters to U.S. tariffs and to TPU must be considered both as costs and as a process of adaptation to the more complex institutional context abroad (Kostova, 1999; Zaheer, 1995).

A further contribution is that institutional distance is not perceived in the same way and does not impact in the same way on all firms. Aguilera-Caracuel et al. (2013) in their study examine 128 multinational companies that come from highly polluting sectors and distinguish between formal and informal institutional distance. They find that a high formal environmental distance guides companies to adapt to the legal requirements of the countries. While if there is a high informal environmental distance it encourages standardization among units. The relevance resides in the fact that companies do not respond in general terms, but to specific pressures on their activities.

This distinction is useful for understanding the thesis under examination, since the shocks linked to tariffs and regulatory frictions concern mainly the formal aspects of the institutional context. Formal institutional distance is associated with laws, regulations, sanctions and norms that can oblige the organization to modify its own operations depending on the situation in the host country (Aguilera-Caracuel et al., 2013). Such statement is in line with

the theory advanced by Kostova, according to which organizational practices might not work in the same way in different institutional contexts due to normative differences between the country of origin and the host one (Kostova, 1999). In the case of European exporters toward the United States, this can concern customs, FDA requirements, labeling, documentation and so on. This does not mean that organizations cannot export, but makes their presence more complex.

Another study conducted by Trąpczyński and Gorynia (2017) concerns the foreign affiliates of Polish companies. They found that firm capabilities improve foreign-affiliate performance but a heavy control of the parent can induce a slowdown in learning and flexibility. At the same time there is partial evidence to say that an assiduous control can lead to reducing the negative effects on performance of institutional distance. A more rigorous control can help firms to manage distant and uncertain contexts, but it can also limit learning and reactivity at the local level. Therefore, strategic responses to institutional distance involve compromises rather than automatic solutions.

This is in line with the results emerged from the studies examined above. According to Gaur and Lu (2007), a greater share of participation could favor survival in markets characterized by a high institutional distance. Shirodkar and Konara (2017) argue furthermore that partial participation could mitigate the negative effect of institutional distance on performances in emerging markets. All this indicates that the optimal strategy will depend on the type of market, on the degree of institutional distance and on the need for local knowledge of the firm. The present thesis argues that the recourse to importers or distributors by firms is not limited to commercial reasons but can be considered a strategy of management of institutional distance, especially where in the local market there exist local regulatory and institutional knowledge that fall outside the control of the foreign exporter.

A last contribution is given by Lindner, Muellner, and Puck (2016) who examined 3.764 greenfield investments from developed into less-developed markets. They demonstrate that institutional distance, institutional quality and institutional dynamics impact on the marginal cost of debt. The study is not focused on exports but has a relevance because it indicates to us that institutional distance influences not only operational performance but also the perceived risk and the international operational financial cost of the activity. This reinforces the idea that institutional contexts influence the strategic decisions of firms through different channels, among which uncertainty on future conditions.

In the context of the present research, the aforementioned evidence allow a broader understanding of the concept of shock in the case of tariffs. Both tariffs and trade policy uncertainty influence exporters not only through direct effects on costs and on margins, but also because the United States market becomes more demanding from the institutional point of view, due to the necessity to face regulatory issues, dependencies on importers, documentation and possible uncertainties relative to future changes in policy. Therefore, the knowledge coming from the field of international trade are necessary to understand the reasons at the basis of the decision-making process of companies, which leads them to act with moderation rather than withdrawing completely or pursuing aggressive growth strategies.

Study	Level of analysis	Main finding	Relevance for this thesis
Furceri, Hannan, Ostry, & Rose (2018)	Cross-country macro evidence	Tariff increases reduce output and productivity and are associated with higher unemployment and inequality.	Establishes that tariffs operate as macroeconomic shocks rather than narrow border distortions only.
Boer & Rieth (2024)	U.S. macro evidence	Unexpected tariff shocks reduce imports, exports, investment, and GDP; tariff shocks appear stronger than TPU shocks in the estimated framework.	Useful for framing tariffs as dynamic macro shocks with broader domestic effects.
Kohlscheen, Rungcharoenkitkul, Xia, & Zampolli (2025)	Global policy/macro perspective	Tariffs affect economies primarily through trade volumes and prices, while also generating indirect effects such as inflation, uncertainty, and supply-chain disruption.	Supports the broader transmission logic linking tariffs to macro and firm-level channels.
Amiti, Redding, & Weinstein (2019)	U.S. tariff episode, price incidence	Border pass-through is close to complete, implying that tariff costs are largely transmitted into import prices.	Central for explaining how tariffs affect firms through immediate price and cost pressures.

Flaaen, Hortaçsu, & Tintelnot (2019)	U.S. sectoral evidence	Consumer costs can exceed tariff revenue, and downstream outcomes depend on firms' ability to relocate production.	Connects tariffs to welfare losses and adjustment through production reorganization.
De Loecker, Goldberg, Khandelwal, & Pavcnik (2016)	Firm-level evidence from trade reform	Trade reforms affect both marginal costs and markups, depending on competition and input-cost conditions.	Relevant for interpreting how tariff shocks may affect firm pricing and competitiveness.
Goldberg, Khandelwal, Pavcnik, & Topalova (2010)	Firm/product evidence from India	Lower input tariffs expand imported input variety and support product expansion.	Shows why access to foreign intermediates matters for firm capabilities and adjustment.
Topalova & Khandelwal (2011)	Firm-level productivity evidence	Productivity gains are stronger when input tariffs fall than when output tariffs are reduced.	Supports the argument that tariffs on inputs can damage firm performance through supply-side channels.
Meleshchuk & Timmer (2024)	Firm-level evidence on capital goods	Changes in the cost of capital goods affect investment choices and labor use.	Relevant for explaining how tariffs can constrain modernization and capital deepening.
Barata da Rocha, Boivin, & Poitiers (2025)	EU sector/country exposure	Exposure to U.S. tariffs differs substantially across EU countries and industries.	It is useful for establishing that tariff vulnerability is uneven already at the country-sector level.
Bottoni, Mariz, & Pini (2025)	Italian firms under 2025 tariff tensions	Italian firms' turnover expectations deteriorate under tariff shocks, with diversification acting as a resilience factor.	Highly relevant for the thesis because it links tariff exposure, expectations, and Diversification among Italian firms.
Iseki, Miyakawa, & Shinozaki (2026)	Shipment-level firm evidence	Firms adjust differently across price, margin, and exit margins; MSMEs may cut prices more uniformly and show	One of the closest studies to your micro-level focuses on heterogeneous firm responses to tariff shocks.

		distinct short-run vulnerabilities.	
Ludema & Yu (2016)	Transaction/firm-level pass-through	Tariff pass-through varies with productivity and product quality and can be incomplete.	Supports the argument that tariff incidence differs systematically across firms and products.
Meng & Wang (2023)	Firm adjustment and export reallocation	Trade shocks can reduce entry and increase exit on average, but multi-market exporters may reallocate toward alternative destinations.	It is important for your argument that some firms respond strategically through reallocation rather than simple contraction.
Giordano & Lopez-Garcia (2019)	EU firm heterogeneity	Export firms are systematically larger and more productive, reflecting selection into foreign markets.	Help explain why tariff resilience is linked to productivity and international integration, not size alone.
Autor, Dorn, Hanson, & Song (2014)	Worker-level adjustment evidence	Trade shocks create uneven adjustment costs, with weaker initial conditions associated with worse outcomes.	Indirectly reinforces the broader heterogeneity logic behind unequal tariff adjustment capacity.
Bloom (2009)	Macro uncertainty shocks	Uncertainty shocks trigger temporary freezes in hiring and investment.	Supports the idea that the costs of protectionism may emerge through uncertainty before tariffs fully bite.
Guiso & Parigi (1999)	Italian firm-level investment	Demand uncertainty reduces investment, especially when investment is hard to reverse.	Particularly valuable because it provides Italian evidence consistent with the irreversibility logic.
Bloom, Bond, & Van Reenen (2007)	Investment dynamics under uncertainty	Higher uncertainty weakens firms' responsiveness to positive shocks.	Helps explain delayed strategic reactions and slower adjustment under TPU.
Baker, Bloom, & Davis (2013)	Policy uncertainty measurement	Policy uncertainty innovations foreshadow declines	Justifies treating policy uncertainty as a distinct and

		in output, employment, and activity.	measurable constraint on firm decisions.
Handley (2011)	Trade policy uncertainty and firm entry	TPU acts like a tariff-equivalent trade cost and discourages export participation.	One of the key empirical foundations for your TPU mechanism.
Handley & Limão (2012)	Trade and investment under policy uncertainty	When uncertainty is reduced, firm entry rises sharply.	Central for arguing that firms react to future tariff risk, not just current tariff levels.
Handley & Limão (2017)	TPU, trade, and welfare	Lower uncertainty increases trade, entry, and welfare even without immediate tariff changes.	Critical for connecting TPU to export participation and broader economic consequences.
Sheffi (2025)	Managerial and supply chain perspective	Firms facing tariff uncertainty may react in three main ways.	Helps distinguish between immediate tactical/operational responses and strategic redesign under TPU.
Gaur & Lu (2007); Shirodkar & Konara (2017)	Foreign subsidiaries	Institutional distance reduces subsidiary performance, while ownership strategy mitigates its effects.	Demonstrate the performance implications of institutional distance.
Aguilera-Caracuel et al. (2013)	Multinational environmental management	Formal and informal institutional distance produce different strategic responses	Shows that different dimensions of institutional distance have distinct strategic effects.
Lindner et al. (2016)	Foreign direct investment	Institutional distance and institutional quality increase financing costs and investment risk.	Shows that institutional distance affects firms through broader economic and financial mechanisms.
Trąpczyński & Gorynia (2017)	Foreign affiliates	Parent control mitigates some negative effects of institutional distance.	Highlights how governance choices shape firms' ability to cope with institutional distance

Table 2 - Summary of Prior Empirical Evidence

3 Research methods and empirical design

This chapter discusses the research design and empirical strategy that was used in this thesis. In the thesis, a mixed-method approach is used (Creswell & Plano Clark, 2007). This is in line with the aim of assessing not only the overall pattern in which international trade is affected by US tariffs and trade policy uncertainty, but also how European exporters react to these shocks at the micro-level.

The quantitative part is based on secondary data on international trade. The approach is mainly descriptive and comparative. The aim is to assess changes in patterns of international export for various countries, industries, and markets, as well as over time, especially focusing on the US market and episodes involving tariffs. The qualitative part is instead aimed at supporting the quantitative findings by assessing firm-level responses to tariff-related uncertainty through strategic responses.

Taken together, these two components form an integrated empirical design, as can be seen in Figure 1. The quantitative analysis provides the sectoral and trade-level background against which firm-level behavior can be interpreted, while the qualitative evidence helps explain how adjustment may occur beyond what is directly observable in aggregate export data alone.

In this study, the theoretical hypotheses were tested using a comparative empirical approach. However, the objective is not to demonstrate a causal relationship, but rather to verify whether the differences anticipated by the theory can be observed quantitatively for the specified periods; from a qualitative perspective, the study serves an exploratory purpose. The descriptive statistics and the DiD framework are combined to capture whether the sectoral patterns observed are consistent with the different exposures to the US tariffs and TPU.

3.1 Quantitative data

3.1.1 Data Description

The quantitative part of the thesis is based on secondary trade data collected from official statistical sources. The main databases used are Eurostat for European Union trade flows, where, with filters, I could also access Italian trade data. The source was selected because they provide consistent and comparable information on exports by partner country, product category, time period, and measurement unit, and they are appropriate for examining sectoral trade dynamics over time. Taking data from the same source also guarantees reliability and comparability. The chosen data are monthly export data for two main reporting units: Italy and EU27. The United States was chosen as the primary partner market because the thesis examines the effects of U.S. tariff measures and trade policy uncertainty on European exporters. In addition to exports directed to the United States, broader benchmark series are also used in total exports to the world. Specifically, Italy to the world and EU 27 to extra-EU trade flows, due to data incompatibility. Eurostat, in fact, reports trade for the European Union as an aggregate entity. This allows us to contextualize the weight of the U.S. market within the overall export performance of each sector. This choice was made primarily to assess the relative weight of the U.S. market within total exports and to understand the relevance of trade.

The temporal coverage of the dataset is between 2016 and 2025. The first period was selected in order to capture the years before and the beginning of Trump's first term, where the first relevant tariffs were imposed. At the same time, the second period was included to provide an updated descriptive view under the second mandate, given the release of new tariffs. The use of these two windows makes it possible to compare pre-shock and post-shock dynamics. Moreover, it allows us to observe whether more recent developments show continuity or discontinuity with earlier tariff episodes. Since the 2026 series is still incomplete, they are treated with caution and are used only for preliminary descriptive purposes rather than for strong inferential claims. In the year 2026, the only month available for analysis on Eurostat was January 2026, but in an incomplete way. In the specific, values and quantities for Italian exports to the world, were not available. This is the reason that the month is excluded from the analysis. It should also be noted that the 2017–2020 window includes the COVID-19

shock, which affected international trade flows in 2020 and may have contributed to abnormal movements in export values and quantities during that year. For this reason, the results for the first tariff-related window are interpreted with caution: the comparison between 2016 and 2017–2020 is used to capture the broader period of Trump’s first trade policy cycle, while the separate comparison between 2024 and 2025 provides a more recent window that is not directly affected by the Covid-19 disruption (WTO, 2020).

The empirical strategy is based on a combination of aggregate export series and sector-specific export series. First, total exports from Italy to the United States and total exports from EU27 to the United States were collected, together with the corresponding broader benchmark series (exports to the world). Export value is measured in euros, while export quantity is measured in the physical unit reported by Eurostat for each sectoral series. In the cleaned and master datasets, these two measures are kept separate through the variable’s “indicator” and “amount”, where “indicator” identifies whether the observation refers to export value or export quantity, and “amount” reports the corresponding numerical value. These aggregate series provide a general macro-level picture of export dynamics. Second, the analysis was narrowed to a selected set of sectors considered especially relevant for the research questions. The final sectoral selection includes food, beverages, iron and steel, aluminum, machinery and transport equipment, and pharmaceutical products. These sectors were chosen for both theoretical and empirical reasons. Food and beverages are relevant because part of the qualitative evidence is expected to involve firms operating in these industries. Iron and steel and aluminum were included because they are among the sectors most directly associated with U.S. tariff measures. Machinery and transport equipment were selected as a major export-oriented manufacturing category, while pharmaceuticals were included as a comparison or control sector, as it appears to have been largely insulated from these measures.

For each of these sectors, export data were collected separately for:

- Italy to the United States,
- EU27 to the United States,
- Italy to the broader benchmark market,
- EU27 to the broader benchmark market.

For each trade flow, both export value and export quantity were collected. The inclusion of both variables is important because changes in export values may reflect not only changes in volumes, but also price effects or compositional shifts. A comparison between value and quantity, therefore, helps identify whether observed changes are primarily associated with lower physical export volumes, higher unit values, or a combination of both.

3.1.2 Data preparation

Because the original downloaded files were not immediately ready for analysis, it was decided to clean the Excel file. The raw files contained metadata, multiple sheets, and both import and export series. Since the focus of the thesis is on export performance, only the export series was retained. For each sector and for the total exports, the relevant information was extracted and reorganized into a clean dataset with a uniform structure. The raw files were first kept as archived source files, while the cleaned files were created separately in order to standardize the data and make cross-sector comparison easier. The first cleaning resulted in seven Excel files, six sectors, and the total export file.

Each sector-specific file includes:

- the monthly date series,
- export value to the United States,
- export quantity to the United States,
- export value to the broader benchmark market,
- export quantity to the broader benchmark market,

for both Italy and the EU27. This produced a set of harmonized sectoral datasets that could be directly used for descriptive comparison across countries, markets, and variables.

The cleaned datasets were organized in a wide format, with the time variable in the first column and the different export series in separate columns. This format was chosen because it facilitates the initial inspection of trade patterns, the construction of descriptive graphs, and the comparison of parallel series across reporting units and destination markets. The wide format also provides a practical basis for subsequent processing in statistical software.

After the initial cleaning of the sectoral Excel files, an additional step was necessary to make the quantitative analysis more systematic and easier to implement in statistical software.

Conducting a more integrated analysis across sectors, countries, markets, and indicators is the primary reason a consolidated master dataset was built.

The master file was built by combining the cleaned sectoral datasets into a single database in “long” format. In this structure, each row corresponds to a specific observation. More specifically, the final master dataset includes the following variables: date, year, month, sector, reporter, partner, market type, benchmark definition, indicator, and amount. The master, therefore, includes all the variables and sectors already described in the Excel files, but reshaped. The construction of the master file required the harmonization of the naming conventions and of the internal structure of the different cleaned files. This step was important to avoid inconsistencies that could later distort comparisons between sectors or between reporting units. The datasets were checked, through R and manually, to look for inconsistencies or errors, which were corrected where necessary. After this correction, the final master file resulted in a complete and balanced monthly panel for the analytical period used in the thesis. In this way, each combination constitutes a complete monthly series.

The resulting “long” format structure was chosen because it fits better with statistical processing and comparative analysis compared to the original “wide” format. In particular, it allows the researcher to filter, group, and transform the data more efficiently, and supports the construction of derived variables and indicators in a transparent way. It also facilitates the production of descriptive statistics, period averages, growth rates, and comparative graphs within a single analytical framework, instead of requiring the repetition of the same procedure separately for each sectoral file.

A further advantage of the master dataset is the creation of a unified analytical workflow in RStudio. This was particularly useful to build variables such as subperiod groupings, export shares, and proxies for unit values coherently across all sectors.

In order to make the sectoral datasets more suitable for systematic comparison, each cleaned Excel file was further organized into three additional analytical sheets. This intermediate step was introduced to conduct a consistent and replicable analysis across all sectors. This made it possible to inspect the data carefully, identify possible anomalies, and maintain comparability across sectors before any further integration into statistical software.

Master Trade Dataset - Variables					
<i>Monthly panel, January 2016 – December 2025 · N = 5,184 observations · 6 sectors × 2 reporters × 2 partners × 2 indicators × 108 months</i>					
Panel A — Identifier and Structural Variables					
Variable	Type	Description	Values / Range	Unique Values	Notes
date	String	Monthly time identifier in ISO year-month format	2016-01 to 2025-12	108	Serves as the primary time index; no missing values
year	Integer	Calendar year extracted from the date field	2016, 2017, ..., 2025	9	Useful for yearly aggregation or fixed-effects specification
month	Integer	Calendar month extracted from the date field	1 to 12	12	Enables seasonal decomposition or month fixed effects
sector	String	Product sector to which the observation belongs	aluminum, beverages, food, ironsteel, machinery, pharma	6	Each sector derived from a separate Comext extract; joined here
reporter	String	Reporting geographic area (exporter)	EU27, Italy	2	Italy is a subset of EU27; both are included as separate reporters
partner	String	Destination partner market	US, benchmark	2	US = exports to the United States; benchmark = broader comparison market
Panel B — Classification and Benchmark Variables					
Variable	Type	Description	Values / Range	Unique Values	Notes
market_type	String	Distinguishes between the target (US) market and the	target_market, benchmark	2	Mirrors the partner variable; target_market ↔ US, benchmark ↔

		benchmark market			broader market
benchmark_definition	String	Specifies which geographic aggregate defines the benchmark comparison	World, US	2	In this master file, the benchmark is uniformly set to World for all sectors.
Panel C — Outcome / Measurement Variable					
Variable	Type	Description	Values / Range	Unique Values	Notes
indicator	String	Type of trade flow measurement for the given row	quantity, value	2	quantity = kg; value = EUR. Each month, the sector-reporter-partner combination has two rows
amount	Integer	Observed export amount as recorded in the cleaned sector files	Min: 518,644 Mean: 3,816,307,000 Median: 550,540,900 Max: 94,474,790,000	N/A (continuous)	Unit depends on indicator: kg for quantity rows, € for value rows; right-skewed distribution.
Panel D — Dataset Structure Summary					
Dimension	Count	Details			
Total observations	5,184	6 sectors × 2 reporters × 2 partners × 2 indicators × 108 months			
Sectors covered	6	Aluminum, Beverages, Food, Iron & Steel, Machinery, Pharmaceuticals			
Reporting entities	2	EU27 (aggregate), Italy (member state)			
Partner markets	2	United States (target), World (benchmark)			
Time coverage	108	Monthly: January 2016 – December 2025			
Indicators	2	Quantity (kg) and Value (€) for each combination			
Missing values	0	The dataset is fully balanced; no missing observations			
Notes: Data sourced from Eurostat Comext bilateral trade microdata. The dataset follows a long (tidy) format: each row represents a unique combination of date, sector, reporter, partner, and indicator. Quantity is measured in kilograms (kg); Value is measured in euros (€). The benchmark partner is defined as the world's exports throughout this master file. The analytical master dataset includes observations for 2016–2022 and 2024–2025; 2023 is not included. January 2026 is excluded because of incomplete data.					

Table 3 - Master Trade Dataset - Variables

3.1.3 Descriptive data analysis

The quantitative analysis developed in this thesis is primarily descriptive and comparative rather than causal. The purpose is not to estimate the exact causal effect of tariffs through a formal econometric identification strategy, but rather to examine how export patterns evolved across sectors, countries, and time periods in correspondence with tariff-related episodes and heightened trade policy uncertainty. The analysis, therefore, focuses on:

- the evolution of export values and quantities over time,
- comparisons between Italy and EU27,
- comparisons between U.S.-directed exports and broader benchmark exports,
- sectoral differences in trade dynamics,
- and preliminary indications of changing market dependence or possible reallocation patterns.

The first analytical sheet contains the summary statistics. This sheet was designed to provide an immediate descriptive overview of each sector-specific dataset. The statistics selected include the mean, median, standard deviation, minimum, maximum, and the number of observations for each export series. These measures were included because they offer a basic but useful picture of the level, distribution, and variability of exports over the period for which they were observed. The mean was used to capture the average level of exports, with the median also included as an alternative measure that is less affected by extreme monthly observations. The standard deviation was used to measure the volatility of the data, which can be important for comparison between sectors or reporting units. The minimum and maximum values were included to measure the range of variations, which could include outliers, with the number of observations used to verify the consistency of the data.

Moreover, in the same sheet, sub-period means were also calculated. More specifically, average values were calculated for four reference periods: 2016, 2017-2020, 2024, and 2025. The sub-period means were used in the model because they were more informative for the purposes of the thesis than using the mean value for the whole time period. The first period is used as a pre-shock period, before the first tariff measures associated with Trump's first term. The second period is used because it is the time when Trump's tariff measures and associated uncertainty were most relevant. The third and fourth periods were distinguished

in order to try to catch some recurring patterns between the most recent baseline and the new tariff deployment.

In addition, the summary sheet also includes monthly export share indicators for both Italy and EU27, calculated separately for value and quantity. These shares were constructed in order to measure the relative importance of the U.S. market within the broader export performance of each sector over time (export to the US/export to the world). Including these monthly shares at this stage is useful because they allow the evolution of sectoral dependence on the U.S. market to be observed directly throughout the period, rather than only through period averages.

The second analytical sheet was labeled growth and exposure. Its purpose is to move beyond simple descriptive levels and provide a more structured view of how each sector changed across the main reference periods. This sheet includes, first, percentage changes between the selected sub-period averages. In particular, changes were calculated between 2017 and 2020, and between 2016 and 2025, and between 2016 and 2024. Percentage changes allow comparison of the relative magnitude of export growth or decline across sectors and export series, even when their absolute levels differ substantially.

Second, the growth and exposure sheet includes period-based measures of U.S. market exposure, again for both Italy and EU27, and for both value and quantity. These indicators are based on the ratio between exports directed to the United States and exports directed to the broader benchmark market. Their inclusion is important because the thesis is not only concerned with whether exports rise or fall, but also with how strongly each sector appears to depend on the U.S. market relative to its broader export activity. This helps distinguish between sectors in which the United States is only a marginal destination and sectors in which it represents a more substantial share of external demand.

The same sheet also includes a simple unit-value proxy, defined as the ratio of export value to export quantity. This proxy was not introduced to estimate exact prices, but rather to provide an approximate indication of whether value and quantity evolve similarly or differently over time. The construction of this indicator follows a standard practice in international trade statistics, where unit values are commonly computed as trade value divided by quantity and used as an approximate proxy for export or import prices, while acknowledging that they may also reflect product composition, quality differences,

aggregation effects, or changes in measurement units rather than pure price movements (Berthou & Emlinger, 2011). This is useful because, according to export analysis, a rise in export value does not necessarily imply an increase in physical volumes. It may also reflect changes in product composition or higher per-unit values. The unit value proxy, therefore, provides an additional descriptive tool for interpreting the relationship between the value and quantity series without making stronger claims than the data allow.

The third sheet of the analytical material consists of the graphs, which are utilized in the initial visual analysis of the sectors. This graph was directly derived from the processed monthly series and was intended to provide support in the uniform description of the data. With regard to the main visual analyses of the data per sector, the following are the key comparisons: Italy to the U.S. vs. Italy to the benchmark market, and EU27 to the U.S. vs. EU27 to the benchmark market, each of which is distinguished between export value and export quantity. This enables the comparison of the evolution of the U.S.-oriented exports with the general trends and the determination of whether the U.S. market has different characteristics compared to the general benchmark market for the same sector.

In addition to these series comparisons, the graphical section also includes visualizations of the monthly U.S. export share over time. These figures are useful because they allow changes in the relative weight of the U.S. market to be observed dynamically across the entire period. While the summary and growth sheets provide numerical measures, the graphs help identify breaks, trends, and divergences more intuitively. For this reason, the graphical sheet functions as a complement to the numerical descriptive analysis rather than as a separate analytical step.

Taken together, these three analytical sheets make each sectoral file a structured descriptive unit. The summary sheet provides the basic statistical profile of the data, the growth and exposure sheet captures relative changes and dependence on the U.S. market, and the graphical sheet supports visual comparison of export dynamics across countries, markets, and variables. This sector-by-sector preparation phase was an important intermediate step in the quantitative analysis, as it allowed the dataset to be checked, standardized, and interpreted consistently before the next stage of empirical processing.

3.1.4 Econometric data analysis

After the import into RStudio, the first step consisted of checking the structure of the dataset and verifying that all the variables had been read correctly. The date variable was then converted into a monthly time format in order to support correct ordering and time-based analysis. Additional variables were also constructed to facilitate the analysis. In particular, a period group variable was created in order to classify the observations into four reference periods: 2016, 2017 - 2020, 2024, and 2025. These subperiods reflect the empirical logic of the thesis and allow for comparison between the pre-tariff phase, the first period related to the tariffs, and the more recent phase associated with renewed tariff activity. The observations from 2026 were excluded from the main analysis because the series were incomplete and not fully comparable with the previous years.

Building on the descriptive outputs in the previous paragraph, a second phase of quantitative analysis was conducted using a difference-in-differences framework. This approach was chosen because difference-in-differences is commonly used to compare changes over time between a treated group and a comparison group, allowing the researcher to assess whether the treated units experienced a differential change after a policy shock relative to the control units (Lechner, 2011; Wing et al., 2018). This allows us to move beyond descriptive comparison and to provide a more rigorous assessment of whether the tariff episodes had a measurable effect on export performance in the treated sectors relative to the pharmaceutical sector, which serves as the control group. The pharmaceutical sector was selected as the control sector because the preliminary descriptive analysis showed a more resilient and expansionary export pattern than the tariff-exposed sectors, especially in the U.S. market. This makes it a useful benchmark against which to compare sectors more directly associated with U.S. tariff measures, while acknowledging that it should be interpreted as a practical comparison group rather than as a perfectly unaffected counterfactual. The sector, moreover, is often exempt from U.S. tariffs (Marketscreener, 2025).

DiD serves as a formal comparative tool rather than as a strict causal identification strategy. The treatment groups of sectors were not randomly assigned to the treatment of tariff exposure, and there might be other variables that may affect the dynamics of exports for different sectors in addition to those related to tariffs, such as global demand, logistics, sectoral shocks, and other macroeconomic developments. For that reason, the estimates of

interaction terms are seen as indicators of relative differences between the treatment group and the control pharmaceutical sectors.

The estimation was performed using the *fixest* package in R, which allows for the inclusion of multiple fixed effects and for clustering of standard errors at the sector level. The main specification models are specified as follows:

$$Y_{srt} = \alpha + \beta_1 Treated_s + \beta_2 (Treated_s \times Post_t) + \gamma_t + \delta_r + \varepsilon_{srt}.$$

Y_{srt} denotes the dependent variable for sector s , reporter r , and period t ; $Treated_s$ is a dummy equal to 1 for the tariff-exposed sectors and zero for pharmaceuticals; $Post_t$ identifies the relevant post-treatment period; γ_t are year fixed effects; and δ_r are reporter fixed effects. Because the post dummy is absorbed by the year fixed effects, the coefficient of primary interest is the interaction term β_2 , which captures the relative change in the outcome variable for treated sectors compared with pharmaceuticals after the beginning of the relevant tariff-related phase. The model is estimated separately for the two-time windows considered in the analysis, namely 2016 vs 2017–2020 and 2024 vs 2025. The first window captures the first Trump tariff cycle, while the second captures the more recent phase of renewed tariff-related tension and policy uncertainty. In the baseline specification, the dependent variable is the logarithm of the U.S. export share. This variable does not measure export performance in absolute terms, but rather the relative importance of the U.S. market within each sector's broader export activity. This is relevant because a sector may continue to expand overall while reducing its relative exposure to the U.S. market. The same empirical structure is then applied to alternative dependent variables to decompose the overall result and assess whether the relative divergence is driven mainly by the quantity component or the relative price component. This separation also allows the analysis to assess whether the magnitude and direction of the relative effect differed between the first and the more recent tariff-related phase. A cross-sectoral analysis was also carried out by replacing the aggregate treatment dummy with sector-specific interaction terms, using pharmaceuticals as the omitted baseline, to identify which sectors exhibited the strongest response and whether the adjustment mechanism differed across sectors. The same interaction structure was extended to include a reporter dimension, allowing for a direct comparison between the Italian and the EU27 responses within each sector. Finally, an event study specification was estimated for each treated sector against the pharmaceutical control, with year-by-year coefficients referenced to 2017, to verify that no differential pre-trend existed prior to the tariff shocks

and to trace the timing of any effects that emerged after their introduction. All the variables used in the analysis can be seen in Table 4 below.

The DiD results are analyzed in light of the key assumptions underlying the model. In this case, it is necessary to determine whether there was a difference between trends in the treatment sectors and those in the control sectors (pharmaceuticals) prior to the intervention, as differing trends would make it difficult to interpret the interaction effect. To this end, regression models based on event studies and robustness tests using other variables were employed to verify whether the results were based on a particular regression model or on a general trend across sectors. Given the limited number of sectors and other shocks, such as the pandemic, the DiD estimates can be regarded as comparative results.

The master file was therefore useful because it enabled all key transformations to be performed within a single, coherent database, rather than working separately on each sectoral file. In practical terms, it allowed the analysis to move from simple inspection of parallel series to a more structured comparative design. Using the master dataset in RStudio, it became possible to generate descriptive statistics for each sector and subperiod, compare the average levels between the time windows, calculate percentage changes between the main reference periods, and build comparative graphical representations of export dynamics among Italy, the EU27, the U.S. market, and the reference market.

Variable	Meaning and classification	What it aims to understand
Descriptive statistics		
U.S. export share	Ratio between exports to the United States and exports to the broader benchmark market, calculated for both value and quantity.	Measures the relative importance of the U.S. market within each sector's broader export activity and captures sectoral exposure to the U.S. market.
Percentage change between periods	Relative change in export levels or exposure indicators between selected reference periods.	Assesses whether exports increased or declined between the baseline and tariff-related windows, making comparison possible across series with different absolute sizes.

Unit value proxy (uvp)	Ratio between export value and export quantity.	Provides an approximate indication of value per unit, helping to interpret whether changes in export value may reflect volume movements, price/composition effects, or both.
Econometric variables		
log_share	Logarithm of the ratio between exports to the United States and exports to the benchmark market. Dependent variable	Measures the relative importance of the U.S. market within each sector's broader export performance. It is the main dependent variable used to assess whether tariff-exposed sectors became relatively less oriented toward the U.S. market.
treated	Dummy variable identifying tariff-exposed sectors, with pharmaceuticals used as the comparison sector. Independent variable	Captures the baseline difference between sectors potentially affected by tariffs and the pharmaceutical sector before the post-treatment period.
post	Dummy variable identifying the tariff-related period in each time window. Independent variable	Distinguishes the period after the relevant tariff-related shock from the baseline period. It allows the analysis to compare changes before and after the policy-relevant phase.
treated × post	Interaction between the treated-sector dummy and the post-period dummy. Independent variable of interest	Represents the main Difference-in-Differences estimate. It captures whether treated sectors experienced a different change in U.S. export share compared with pharmaceuticals after the tariff-related period began.
Approx. % effect	Transformation of the log coefficient into an approximate percentage effect. $\exp(\beta)-1$	Makes the estimated effect easier to interpret in economic terms, translating log-point changes into percentage changes.
Fixed effects	Controls for systematic differences across years and reporters. Control variable	Reduce the risk that estimated effects are driven by general time shocks or stable differences between Italy and the EU27 rather

		than by the treated-sector dynamics.
Clustered standard errors	Standard errors clustered at the sector level.	Account for the correlation of observations within the same sector and make statistical inference more appropriate for panel-style sectoral data.
N	Number of observations included in the model.	Indicates the size of the estimation sample used for each specification.
Within R²	Share of within-group variation explained by the model after fixed effects.	Provides a diagnostic indication of how much variation is explained within the fixed-effects structure.
Reporter heterogeneity	Separate or interacted estimates for EU27 and Italy.	Tests whether the tariff-related effect differs between the broader EU27 aggregate and Italy specifically. This helps assess whether Italian exporters followed a similar or different pattern compared with the EU average.
treated × reporter × post	Triple interaction between treated sectors, reporter, and post-period. Independent variable of interest	Captures whether the post-treatment change for treated sectors differs by reporter, allowing direct comparison between Italy and EU27.
treated:reporterItaly	Baseline interaction identifying the pre-existing difference between Italy and the EU27 among treated sectors. Control variable	Checks whether Italy already differed from EU27 before the post-treatment phase, so that later differences are not wrongly interpreted as tariff-related effects.
log_share_total_us	Logarithm of the ratio between sectoral exports to the U.S. and total reporter exports to the U.S. Dependent variable	Provides a robustness check using an alternative denominator. Instead of comparing U.S. exports with benchmark exports, it measures each sector's weight within the reporter's total U.S. export portfolio.
Alternative denominator specification	Model using log_share_total_us instead of the baseline log_share.	Tests whether the main result remains consistent when U.S. exposure is measured relative to total U.S.-directed exports

		rather than relative to benchmark-market exports.
Pooled specification	The model was estimated by combining all treated sectors together.	Provides an overall average effect for tariff-exposed sectors compared with pharmaceuticals.
Reporter-specific specification	Model estimated through interaction terms allowing the treatment effect to vary by reporter, rather than through separate regressions. A baseline reporter interaction is included in Period 2 to control for any pre-existing difference between Italy and the EU27.	Assesses whether the average effect differs across reporting units.
log_rel_quantity	Logarithm of the ratio between U.S. export quantity and benchmark export quantity. Dependent variable	Measures whether the change in U.S. export share is driven by relative changes in physical export volumes.
log_rel_price	Logarithm of the ratio between the U.S. unit value and the benchmark unit value, where the unit value is computed as the export value divided by the export quantity for each flow. Dependent variable	Measures whether the change in U.S. export share is driven by relative price or unit-value movements rather than quantities.
Decomposition analysis	Separation of log_share into quantity and price components.	Identifies whether the estimated decline in U.S. export orientation is mainly caused by lower relative quantities, by lower relative unit values, or by a combination of both.
Sector-level decomposition	Bilateral comparison between each treated sector and pharmaceuticals.	Shows whether the adjustment mechanism differs across sectors, rather than assuming that all tariff-exposed sectors respond in the same way.
post_trump1	Post-period dummy for the first tariff-related window. Independent variable	Identifies the period associated with the first Trump tariff cycle and allows comparison with the pre-shock baseline.

post_2025	Post-period dummy for the recent tariff-related window. Independent variable	Identifies the most recent post-shock period and allows comparison between 2024 and 2025.
Bilateral estimates	Sector-by-sector DiD estimates comparing each treated sector with pharmaceuticals.	Assess which sectors display greater or weaker relative changes and whether the main pooled result hides sector-specific patterns.
Significance level	Statistical indication of whether an estimated coefficient is distinguishable from zero.	Helps evaluate whether the observed relationship is statistically meaningful, while remaining cautious about causal interpretation.

Table 4 – Descriptive And Econometric Variables

3.2 Qualitative data

3.2.1 Interviews

The qualitative component of the thesis consists of semi-structured interviews with seven Italian export companies operating in the US market. The firms interviewed operate in food and beverage sector, especially in the wine sector. These sectors were selected because of the relevance and importance of the Italian production, being highly appreciated and requested by the US population (Saiolfi, 2020). It provides a decent setting to examine the effect of tariffs and TPU. The aim of these interviews is to capture the strategic and operational effects and responses that companies exhibit during periods of uncertainty, such as the one we are currently experiencing, or in the face of tariff shocks, thereby complementing the quantitative analysis. The questionnaire is developed in both English and Italian to facilitate participants' understanding and allow them to express themselves at their best, and then is reported in English.

The questionnaire, as can be seen in Appendix 1, consists of five main sections. The first is essentially an introductory section to collect background information on the interviewee, such as their role or international experience. The following section focuses instead on the company profile and exposure to the U.S. market. This serves to understand the reason and

importance of operating in the American market and how the company exports. It is a matter of understanding if there are direct exports, distributors, e-commerce, or subsidiaries. The section has the further purpose of contextualizing companies within the analytical framework and looking at differences that could influence the responses.

Section two is the main part of the questionnaire, aimed at capturing the impact of tariffs and TPU on companies. An attempt is made to maintain the distinction between economic effects and behavioral effects, referring respectively to tariffs and the consequences of uncertainty. This allows for answering one of the thesis's research questions, namely, to understand whether it is more the tariffs or the uncertainty that drives strategic adjustments. Participants are asked to respond separately, with targeted follow-ups to avoid having them answer univocally. Questions on tariffs are linked to the literature on price, margin, and cost transmission, while questions on uncertainty draw on the TPU literature, where uncertainty can affect export participation and investment decisions even before tariff changes fully materialize (Amiti et al., 2019; Handley & Limão, 2017).

Section three focuses on the strategic responses adopted by firms after tariff-related shocks. It examines both tariff effects and trade policy uncertainty, with particular attention to changes in planning, investment decisions, contractual terms, inventory management, and other operational adjustments. This section also explores whether firms adopted a wait-and-see approach in response to uncertainty, for example by delaying investment, postponing market expansion, or avoiding irreversible commitments until the policy environment became clearer. This part is directly connected to the real options and irreversibility perspective discussed in the literature review. According to this view, when decisions involve sunk costs or are only partly reversible, uncertainty increases the value of waiting and may lead firms to postpone entry, expansion, or investment decisions (Bernanke, 1980; Dixit & Pindyck, 1994)

Section four goes deeper into strategic decisions in more detail. It ranges from tactical or operational changes, such as pricing, inventory, or change of suppliers, to broader structural decisions. These include diversification, changes in the production footprint, or in the supply chain. A specific question analyzes whether the commitment made in the foreign market is in any way reversible. This connects well with the literature on sunk costs and exit behavior. Also in this section, it is asked whether a stable policy would have led to benefits and how it would have changed the decisions made. Another question that helps distinguish effects

due to tariffs or uncertainty. This section is linked to the literature on firm-level adjustment mechanisms. Prior studies show that firms may respond to tariff shocks through pricing, markup adjustments, supply chain reorganization, market diversification, or changes in sourcing and production decisions (De Loecker et al., 2016; Flaaen et al., 2019; Bernard et al., 2018). It also connects with the institutional perspective, according to which firms may respond differently to external pressures through adaptation, avoidance, compromise, or other strategic responses (Oliver, 1991)

Section five addresses non-tariff barriers as a complementary dimension of the interview guide. This section was placed at the end because non-tariff barriers are not the primary focus of the thesis, but they provide additional context for understanding the broader constraints faced by European exporters in the U.S. market. The inclusion of this topic is justified by the preliminary observation that, in addition to tariffs, firms may also face regulatory, administrative, certification-related, or procedural barriers that can influence their strategic decisions. For this reason, non-tariff barriers are considered as part of the broader uncertainty environment in which exporters operate, rather than as a separate central object of analysis. This section is connected to the broader discussion of trade barriers in the literature review, where firms' export costs are not limited to tariffs but may also include regulatory, procedural, and market-access constraints. In this sense, non-tariff barriers are relevant because they can interact with tariff-related uncertainty and further shape firms' ability to remain active or expand in the U.S. market (Wacziarg & Welch, 2008; ECB, 2019).

The semi-structured format was chosen because it provides a set of predefined, common questions covering key topics, whilst allowing respondents the space and flexibility to address the issues most relevant to their respective companies. This is an important consideration, as companies differ in nature and structure. Follow-up questions are permitted where necessary to clarify specific points, such as pricing, margin absorption, diversification, relations with importers, or other topics.

3.2.2 Data collection

Data was collected through interviews with individuals working in companies, such as owners, managers, or export managers. These companies were all Italian and operate in the agri-food and wine sectors. The objective was to obtain valuable information from firms

directly involved in tariffs or uncertainty, and for which exports to the USA were part of their business.

The resulting sample of firms includes companies with different exposures toward the United States. Some of these export actively and regularly to the United States, while one of them did so in the past and ceased after losing its importer, resulting in a contrasting case. The sample nonetheless allows for seeing the perspective of firms whose exports are extremely high toward the American market and also for seeing those for whom it is marginal or non-existent.

The interviews followed a scripted format, although the order and depth of the questions could vary from case to case. This was especially due to the role the interviewee held, the exposure toward the American market, and the relevance of the topics that emerged during the discussion. The method was to record and transcribe the interviews. These were subsequently reread and cleaned up to remove repetitions and errors, while always preserving the underlying meaning of the interviewee's words.

Company and product	Interviewee role	U.S. exposure	Sales	Main relevance for the study
IRC WILLIAM DI CARLO SRL (Confectionery)	Owner and manager	Low / non-core	€ 1.111.941 (2024)	Margins already compressed, distributors absorbing costs, FDA and non-tariff barriers
Ursini S.r.l. (Oil)	Export manager	Strategically relevant but not exclusive	€ 3.468.033 (2024)	Trade policy uncertainty, pricing concessions, logistics, FDA, and postponed U.S. fair.

Peperoncino S.r.l. – Cantina Valle Tritana (Wine)	Owner	Very high, approx. 70% of turnover	€ 725.788 (2024)	Strong U.S. dependence, shared tariff absorption, margin compression, and continued U.S. investment.
Citra Vini SC. (Wine)	Production director	No U.S. exposure	€ 58.641.630 (2024)	Contrasting case: loss of importer, export diversification, adaptation to UK/Brexit-related fiscal changes
Spinelli Vini S.r.l. (Wine)	Export manager	Moderate, approx. 8% of turnover	€ 15.390.142 (2024)	Diversification, structured export management, limited tariff impact, and organizational capacity
NOVARIPA - Cantina Ripa Teatina SCA. (Wine)	Commercial director and export manager	Low, approx. 5% of sales	€ 5.978.771 (2025)	Brand protection, tariffs as bargaining leverage, cost optimization, and reduced U.S. commitment.
Pro Pizza S.r.l. (Ready-made pizza dough)	CEO	Moderate, approx. 10% of business activity	€ 9.812.304 (2024)	Shared tariff absorption; combined tariff–FX pressure; delivery terms shaping tariff exposure; low U.S. dependence

Table 5 – List of interviewed companies

3.2.3 Interview data analysis

For the analysis of the interview data, a coding strategy inspired by the framework of Gioia et al. was utilized. This methodology proved appropriate because, rather than simply summarizing the interviews, the qualitative analysis aimed to understand how firms interpret tariff shocks and trade policy uncertainty and how they translate these perceptions into strategic actions. As suggested by Gioia, Corley, and Hamilton (2012), the analysis proceeded in stages, moving from informant-centric observations to researcher-centric themes, and subsequently to aggregate dimensions.

The first step of the analysis involved an open coding of the interviews. This phase focused on ideas and concepts that remained close to the terminology used by the interviewees. These first-order constructs included, for example, issues such as limited room for price reductions, sharing the tariff burden with importers, problems in obtaining forecasts from American counterparts, investment delays, market diversification, and regulatory compliance. The key idea behind this initial phase was to remain close to the informants' own words and experiences, without imposing external interpretive categories. Although the researcher was informed by the literature review and by the possible firm responses identified there, the first-order concepts were not assigned to predefined categories. Therefore, the specific ways in which firms' reactions, constraints, and perceived outcomes materialized emerged from the empirical material.

The literature review provided a preliminary map of the potential firm responses, categorizing them in three groups. The second step involved comparing the first-order concepts across interviews and grouping them into broader second-order themes. This hierarchy was used as a set of sensitizing concepts rather than as a closed coding scheme. This is the stage where similarities and differences between companies were identified regarding concepts such as pricing behaviors, margin compression, market exposures, and market reduction. Several first-order concepts, for instance, those related to margin reduction, shared tariff absorption, and the refusal to grant discounts in the absence of a volume increase, were grouped under the second-order theme of margin protection and selective price adjustment. Similarly, the reduction of marketing expenses, postponing trade fairs, or the weekly revision of business plans were grouped under the theme of strategic moderation under uncertainty. Once the second-order themes had been developed, they were

compared with the preliminary literature-based hierarchy of potential firm responses in order to assess whether the interview reflected tactical responses, operational adjustments or more durable strategic redesign.

In the third step, the second-order themes were further organized into aggregate dimensions. These dimensions provide the primary structure for the qualitative findings section. Four main aggregate dimensions were identified:

1. Prices, margins, and bargaining power in the context of tariff pressure;
2. Strategic moderation and planning under conditions of uncertainty;
3. Market exposure, diversification, and dependence on importers;
4. Regulatory and operational frictions in export markets.

These are used to structure the presentation of results in Chapter 5.

To clarify the analysis process, a data structure was created following the Gioia method. This structure illustrates the path from first-order constructs to second-order themes and aggregate dimensions. This is in line with Gioia's approach to coding, which suggests using data structures to illustrate the relationship between the empirical material and its interpretation, thereby increasing transparency.

The nature of the analysis remained exploratory and interpretive. The goal was to identify recurring patterns and differences between companies. Specifically, the role of differences in the degree of U.S. exposure, company size, product positioning, and importer dependency in shaping companies' perceptions of tariffs was examined.

3.3 Research quality

Quality of research was considered independently for the quantitative and qualitative aspects of the thesis, since each aspect relies on various sources of data, methods of analysis, and standards of quality. As per the thesis research design, conceived as a mixed-methods approach, the quantitative part would be useful in identifying trade patterns, sectoral variations, and fluctuations in the degree of export exposure. In contrast, the qualitative part

helped interpret the patterns through firm-level strategies. Hence, the quality of the study hinged on the reliability and validity of quantitative data as well as qualitative interpretation.

In the case of the quantitative aspect of the research, quality issues pertain mainly to the utilization of reliable secondary data, consistency in cleaning and transforming data, the development of comparable indicators, and clarity of the analytical process. As for the qualitative aspect, research quality can be measured based on the criteria that are commonly employed for assessing qualitative trustworthiness, such as credibility, transferability, dependability, and confirmability (Lincoln & Guba, 1985). These criteria are especially pertinent to the thesis research because the qualitative aspect does not pursue statistical generalization, but rather a credible and clear interpretation of firm-level strategies.

3.3.1 Reliability and validity

Issues related to reliability and validity in quantitative analysis have been resolved primarily through the use of comparable secondary data, a well-defined data-preparation process, and a consistent analytical methodology (Wickham, 2019). The export data used in this research was obtained from Eurostat, which provides harmonized trade statistics by declarant, trading partner, product category, time period, and unit of measurement (Durand, 2024). This allows for greater comparability of data across different sectors and statistical sources, as the information is standardized and obtained from a single official source.

Furthermore, the reliability of the selected dataset was improved through appropriate cleaning and transformation. Firstly, it should be noted that the raw files were archived, whilst clean sector-specific files were produced specifically for the analysis. Metadata and unnecessary time series were removed, retaining only the export streams and organizing all sectoral files according to the same model. Finally, all cleaned data files were manually verified and checked in RStudio, enabling the identification of any missing or problematic information. Ultimately, a comprehensive master file was compiled containing a balanced monthly panel.

Validity was ensured by using variables and their corresponding indicators in line with the research objectives. Export value and export volume were included separately because the distinction between value and volume is important for analyzing changes. The United States'

share of the export activity of the countries under consideration was calculated, as this measures the relative importance of the United States in this activity; the unit value indicator, on the other hand, was included only as a proxy for the former and was not subject to further analysis. This choice of variables makes it possible to identify not only whether there has been an increase or decrease in exports, but also whether there has been a change in dependence on the US market over time.

However, the following limitations must be taken into account. Firstly, these sectors serve only as very general proxies for firms' specialization in the production of goods, as they cannot reflect the full complexity of such specialization at the firm level. Secondly, using extra-EU trade for the EU27 aggregate makes the benchmark less comparable but more consistent when referring to the EU27 aggregate, as total global exports could not be calculated separately for each country due to a lack of data. Furthermore, the 2017–2020 period includes the COVID-19 shock, which may have affected trade flows independently of tariff-related dynamics. For this reason, the results are interpreted cautiously and are not presented as isolating the causal effect of tariffs alone. Moreover, the analysis should not be interpreted as a fully causal identification strategy. In it, many sectors are compared, but the limited number of them, or the presence of trends, or broader shocks (COVID-19) can restrict the strength of the findings. All the analysis should therefore also be interpreted in light of the qualitative part.

3.3.2 Trustworthiness

Trustworthiness is used to assess the quality of the qualitative analysis. Following Lincoln and Guba (1985), the assessment takes into account credibility, transferability, dependability, and confirmability.

Credibility is ensured by the link between the interview guide and the theoretical framework of the research. The interview questions were formulated to explore the fundamental mechanisms addressed in the literature on the subject: costs induced by tariffs, uncertain effects of trade policies, heterogeneity among firms, their responses, adjustments in supply chains, evolving markets, and the possibility of reneging on strategic commitments.

An explicit coding strategy ensured dependability and confirmability. Theory-driven codes, drawn from the conceptual framework, were combined with inductive codes derived from the interview content. According to Miles et al. (2014), coding progressively moved from individual statements to general themes and aggregated dimensions.

Transferability is ensured by providing relevant contextual information on the companies and participants interviewed, while limiting the information reported to what is relevant for the analysis. The results were not considered statistically representative, but were considered analytically useful.

The interviews conducted in Italian were analyzed in their original language in order to avoid altering the meaning of respondents' answers during the coding phase. Only the excerpts selected for presentation in the thesis were subsequently translated into English. The translation was supported by digital translation tools, such as DeepL, and, when necessary. However, these tools were used only as operational support: the final accuracy of the translation was manually verified by comparing the translated excerpts with the original Italian text, with particular attention to preserving the substantive meaning, strategic concepts, and sector-specific expressions used by the interviewees.

3.4 Research ethics

Ethics associated with research are primarily applicable to the qualitative aspect of the thesis due to the direct communication with interviewees and the gathering of firm-level information. The interviews were conducted in accordance with ethical guidelines on informed consent, confidentiality, anonymity, and voluntariness. Prior to the interviews, respondents were briefed on the objectives and aims of the research, its academic character, the estimated time required for the interview, and the intended use of the gathered information.

Voluntariness was guaranteed, and participants were entitled to refuse to answer certain questions and even terminate the interview at any time. The interviews focused on business experiences and responses to tariffs and trade policy uncertainty, without collecting any unnecessary personal or confidential information. Special consideration was given to the

non-disclosure of commercially confidential data related to prices, clients, suppliers, contract terms, and internal strategic plans and decision-making processes.

All the companies are permitted to appear in the thesis. Therefore, company names are also included alongside general contextual information relevant to the analysis. All collected data were used exclusively for the scope of the present master's thesis and not shared with third parties.

The use of digital tools for transcription, translation, or language support was limited to operational assistance. Any translated or processed material was checked manually by the researcher to ensure that the meaning of the original responses was preserved and that confidentiality was not compromised. Overall, the ethical approach adopted in this thesis aims to protect participants while allowing the research to provide a credible and useful interpretation of firm-level responses to U.S. tariff-related uncertainty.

4 Quantitative findings

This section aims to present all results from descriptive and econometric analyses, complemented by tables and graphs.

4.1 Sectoral descriptive analysis: trade patterns across market, geographies, and measures

4.1.1 Food

In this regard, among the other sectors examined, the strength of the food sector emerges; in particular, it appears to have held up relatively well both in the last few years and during the period considered for comparison. Indeed, in terms of the comparison between 2016 and 2017-2020, both in quantity and value, exports to the United States increase for both the EU27 and Italy. For the former, in fact, exports to the United States increased in quantity by 13.1% and in value by 16.9%, while for Italy the increases were even higher, amounting to 20.1% and 22.9%, respectively. This positive trend does not concern only exports to the United States, which indeed appear to be solid, while also exports to the benchmark market

present a performance that can be defined as good overall, despite the greater complexity of the analysis. Thus, while for the EU27 there is a slight decrease in the quantity exported to the rest of the world (-2.0%), the value rises (+9.9%). For Italy, instead, exports rose in quantity by 2.2% and in value by 11.5%.

This resilience is also noted between the periods 2025 and 2024, with different nuances. For Europe, the quantity is seen to decrease by 7.0%, but the value increases by 2.8%. This suggests that the decline is concentrated in quantities rather than in nominal export performance. This could be explained by the rise in the average unit value compared to improved export performance in terms of physical exports. This is evident from the use of the unit value proxy test, where there was a rise in the value of exports of food by the EU27 to the US by 2.8%, but at the same time, there was a decline in the quantity of these exports by 7.0%. The unit value proxy indicator rose by 10.6%. This is also consistent with a broader macroeconomic context in which euro area inflation had declined but remained positive, including food inflation (Lane, 2024). For Italy, the pattern instead remains positive, with increases of 1.2% in quantity and 2.1% in value. Regarding exports to the benchmark market (the entire world), EU27 exports recorded a slight drop in terms of quantity (-1.9%) against constant growth in terms of value (+3.6%); Italy maintained a positive trend on both fronts, with an increase of 4.2% in quantity and 9.1% in value. Despite these differences between value and quantity, the sector shows no signs of retreat but rather of underlying strength.

From a structural point of view, the importance of the U.S. market increased over time, albeit remaining in a secondary position for both the EU27 and Italy. The shares of the U.S. market in the total value of food exports increased from 6.7% in 2016 to 7.2% in 2017–2020 and then reached 9.4% in 2025 in the case of the EU27, while in the case of Italy, they increased from 5.8% to 6.4%, reaching 7.5% in 2025. The same is true for quantity shares, although these are smaller and show a slight decrease in 2025 compared with 2024. This suggests that the U.S. market increased its importance over time, although this importance remained secondary compared to the total reference (benchmark) market. At the same time, the share of the U.S. market in the total value of food exports is smaller for Italy than for the EU27, while the quantity shares are somewhat higher for Italy. At the same time, the increase in the unit value proxy over time, especially in the case of the U.S. market, suggests that the nominal increase in the value of the food sector might be partly explained by an increase in average values, in particular by price effects or changes in export composition, rather than

by a fully uniform expansion of physical export values. Overall, there is still no tangible evidence of weakening; it remains a robust case, although the newer data show some mild signs of adjustment, especially on the quantity side.

Period	Exporting entity	US quantity change	US value change	Benchmark quantity change	Benchmark value change
2016 vs 2017-2020	EU27	13,1%	16,9%	-2,0%	9,9%
2016 vs 2017-2020	Italy	20,1%	22,9%	2,2%	11,5%
2024 vs 2025	EU27	-7,0%	2,8%	-1,9%	3,6%
2024 vs 2025	Italy	1,2%	2,1%	4,2%	9,1%

Table 6 – Food Export Changes

4.1.2 Beverages

The beverages sector shows a somewhat more positive medium-term trend, although the latest results again indicate a weakening in export performance, particularly in value terms. As a matter of fact, exports to the United States increased for both the EU27 and Italy, both in terms of quantity and value in the earlier comparison period, which now spans from 2016 to 2017-2020. Thus, for the EU27, exports to the USA increased by 9.6% in terms of quantity and 13.2% in terms of value, while for Italy the respective increases are 20.6% and 16.2%. This means that the U.S. market was certainly a growing outlet for beverages in that period. As for the broader benchmark, a positive trend is also observed for the EU27, with benchmark exports increasing by 8.4% in terms of quantity and 11.9% in terms of value, while for Italy, a highly irregular pattern is again observed, with a decrease of 50.7% in terms of quantity and an increase of 16.9% in terms of value. This confirms that the medium-term pattern remains more mixed in the Italian case once the broader market is considered, and that nominal growth was not always matched by physical expansion.

The comparison between 2025 and 2024 is less positive. For the EU27, exports to the USA show a decrease of 3.3% in quantity and 13.1% in value, while for benchmark exports, the change is almost zero for quantity (-0.1%) and smaller for value (-5.1%). Italy presents a different picture, though still rather cautious, with exports to the USA increasing slightly for

quantities (+2.7%) and decreasing for values (-7.3%), while for benchmark exports, the changes are rather moderate for quantities (+2.0%) and values (-2.5%). The recent trend seems to indicate a weakening in terms of values rather than a decrease in quantities, especially for the U.S. side. This impression is reinforced by the evolution of the unit value proxy, as this indicator decreases in 2025 for both the EU27 and Italy, for both the U.S. and benchmark markets, pointing to a weakening that is at least partially related to a decrease in values rather than a decrease in quantities.

From a structural perspective, the EU27 is more exposed to the U.S. market than Italy is in the beverages sector. In value, the U.S. market share of benchmark exports for the EU27 rises only slightly from 29.9% in 2016 to 30.3% in 2017-2020, but then falls to 26.8% in 2024 and to 24.5% in 2025, while the corresponding market share for Italy is smaller and overall more stable, moving from 22.6% to 22.5%, then to 23.2%, and finally to 22.0%. In contrast, the quantity shares of the U.S. market for Italy increase sharply compared to 2016 and remain high, indicating that the U.S. market is more relevant, even if the value performance is less positive. Overall, the beverages sector seems to be resilient, but the 2025 data indicate a deterioration in the value dynamics of the export market, which must be considered with caution, especially when the quantity and value series move in opposite directions.

Period	Exporting entity	US quantity change	US value change	Benchmark quantity change	Benchmark value change
2016 vs 2017-2020	EU27	9,6%	13,2%	8,4%	11,9%
2016 vs 2017-2020	Italy	20,6%	16,2%	-50,7%	16,9%
2024 vs 2025	EU27	-3,3%	-13,1%	-0,1%	-5,1%
2024 vs 2025	Italy	2,7%	-7,3%	2,0%	-2,5%

Table 7 – Beverages Export Changes

4.1.3 Aluminum

The pattern of the aluminum sector is ambiguous, with a growth phase in the first analysis period followed by a more recent phase that does not indicate a collapse, but rather a

continuation of the movement with a different composition, as shown in Table 8. Italy and the EU27 increased their exports between 2016 and the 2017–2020 period, both in terms of value and quantity. For the EU27, exports to the United States increased by 27.7% in volume and 29.0% in value, while Italy recorded an even more marked increase in terms of value, with exports to the United States growing by 17.2% in quantity and 52.2% in value. On the contrary, exports to the rest of the world appear more moderate, with EU27 benchmark exports increasing by 1.1% in quantity and 7.2% in value, while Italy records an increase of 6.5% in quantity and 13.5% in value. The initial expansion, therefore, appears even stronger toward the United States compared to other countries, especially in terms of value, although the contrast with the broader benchmark now results in less marked than it seemed previously.

In recent years, however, a different pattern is observed: aluminum exports no longer show the same weakening in values that had emerged in the previous period. EU27 exports to the United States increased by 5.9% in terms of quantity and 5.4% in terms of value, while Italy recorded a more contained increase in quantities but a more marked increase in values, with +1.4% in quantity and +10.6% in value. Similarly, for exports to the rest of the world, from the European side, an increase of 2.6% in quantity and 4.9% in value is observed, while Italy remains positive with +5.0% in quantity and +5.9% in value. In the recent phase, a physical drop in exports is not observed; rather, the data suggest a continuation of export activity with moderate growth, even if the pace of results was clearly less exceptional than in the previous expansionary phase.

This interpretation is no longer supported in the same way by the unit value proxy as previously. The unit value toward the United States for the EU27 increases from 4.00 in 2016 to 4.04 in the 2017–2020 period, then to 6.03 in 2024, and remains almost unchanged at 6.00 in 2025. Italy's performance is even more evident in this regard, with the unit value toward the United States increasing from 2.69 to 3.49, then to 5.61, and further to 6.12 in 2025. The sector, therefore, no longer seems to enter a phase of decreasing average values; on the contrary, the most recent evidence suggests that both quantities and nominal values remained positive, while average values stayed at high levels, especially in the U.S. market.

From a structural point of view, the United States appears more important in recent years than in earlier ones for both the EU27 and Italy, although, as expected, more for the former

than for the latter. In value terms, the U.S. share of the EU27 increases from 12.9% in 2016 to 15.5% in the 2017–2020 period, then to 16.8% in 2024 and again to 16.8% in 2025, while Italy's U.S. share grows from 2.7% to 3.6%, to then drop to 2.9% in 2024 and rise back to 3.0% in 2025.

The aluminum sector does not support the hypothesis of a recent collapse. Rather, the updated data indicate a sector that underwent a more intense expansion phase in the first comparison period and remained positive even in 2025, albeit at a more moderate pace. The main correction compared to the previous interpretation concerns the fact that values have not weakened recently; on the contrary, they have still increased, even if the sector no longer shows the same growth intensity observed in the initial phase.

Period	Exporting entity	US quantity change	US value change	Benchmark quantity change	Benchmark value change
2016 vs 2017–2020	EU27	27,7%	29,0%	1,1%	7,2%
2016 vs 2017–2020	Italy	17,2%	52,2%	6,5%	13,5%
2024 vs 2025	EU27	5,9%	5,4%	2,6%	4,9%
2024 vs 2025	Italy	1,4%	10,6%	5,0%	5,9%

Table 8 – Aluminum Export Changes

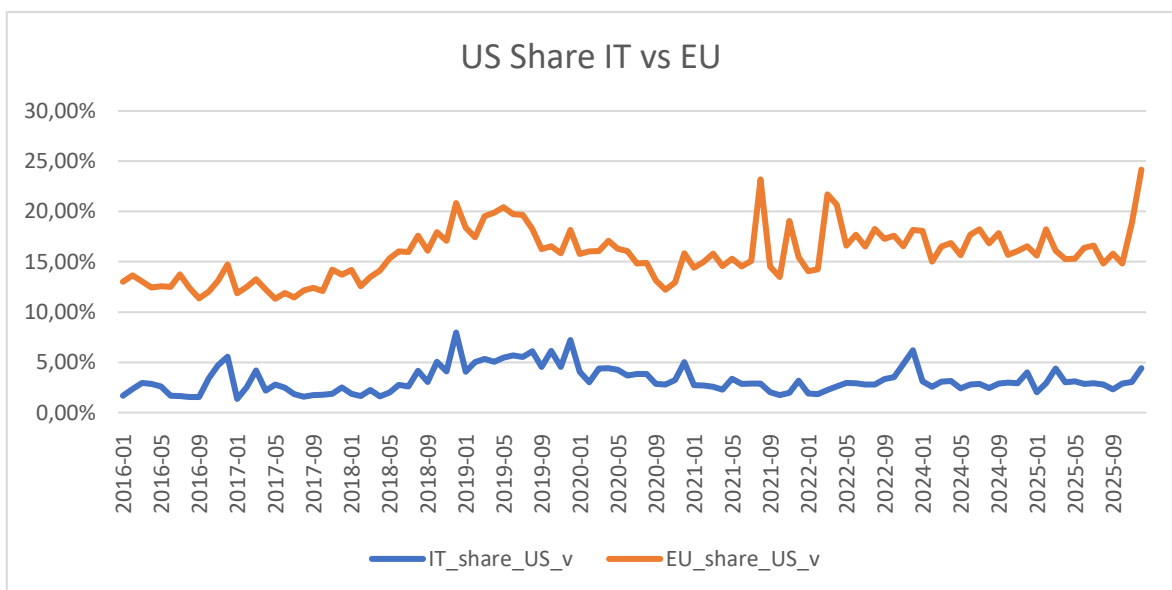


Figure 4 – Values of US Share IT vs EU

4.1.4 Iron and Steel

There may be signs that the iron and steel industry is less resistant to external factors compared to other industries, such as aluminum and food. In particular, even within the near-term range, there appear to be clear signs of weakening based on the quantity indicator. Specifically, during the time period from 2016 to 2017-2020, in the first range, the decline continues to be observed in terms of quantities. In this regard, exports from the EU27 to the United States declined in quantity by 5.4%, and exports from Italy to the United States by 3.1%. There were also declines in reference quantities: 5.4% for the EU27 and 3.1% for Italy. On the contrary, an increase is also indicated in the number of values, with exports from the EU27 increasing by 14.4% and those of Italy to the United States by 12.6%. There was also an increase in reference quantities, specifically for the EU27 by 9.6%, and for Italy by 14.9%. The gap between the two indicators is therefore noticeable. The comparison with 2025 and 2024 is even more revealing. Exports from EU27 to the United States declined in quantity by 14.1% and in value by 16.0%, while Italian exports to the United States fell more sharply, by 16.7% in quantity and 19.1% in value. This contrasts with other sectors where the recent decline focused on quantities, while values were more stable. For iron and steel, the downward movement in both quantities and values occurs simultaneously. Therefore, the recent movement in the sector appears more clearly negative. The reference (benchmark) market also contracts, but more so for EU27, whose exports fell by 9.2% in quantity and 10.1% in value. Italy's performance outside the U.S. market was slightly better, with benchmark quantities roughly holding steady (+0.2%). However, benchmark values fell by 5.7%, suggesting that the sector's difficulties are not confined to the U.S. market.

The export structure still seems more preponderant for Europe than for Italy. In terms of quantity, the U.S. share in the EU27 passes from 11.9% in 2016 to 12.9% in 2017-2020, then rises further to 18.0% in 2024, before falling slightly to 17.0% in 2025. Italy's corresponding share is much lower and decreases over time, moving from 2.6% in 2016 to 2.9% in 2017-2020, then to 2.2% in 2024 and 1.8% in 2025. In values, almost the same thing is noted, with Italy being less dependent on the United States compared to the European Union. However, fluctuations and volatility are noted. In general, it is one of the weakest sectors among those analyzed; it shows little resilience compared with food and, even compared with aluminum,

shows no signs of stabilization or recovery. Precisely in 2025, there is a weakening, especially toward the United States.

Period	Exporting entity	US quantity change	US value change	Benchmark quantity change	Benchmark value change
2016 vs 2017-2020	EU27	2,1%	14,4%	-5,4%	9,6%
2016 vs 2017-2020	Italy	8,4%	12,6%	-3,1%	14,9%
2024 vs 2025	EU27	-14,2%	-16,0%	-9,2%	-10,1%
2024 vs 2025	Italy	-16,7%	-19,1%	0,2%	-5,7%

Table 9 – Iron and steel Export Changes

4.1.5 Machinery

Compared to the industrial sector, the machinery sector shows greater resilience, although it has weakened in the latest period in the USA. In the earlier comparison between 2016 and 2017-2020, for the EU27 and Italy, their position in the U.S. market generally improved, but less markedly than in the previous version. EU27 exports to the United States increased by 4.4% in quantity and 4.4% in value, while Italian exports grew by 7.8% in quantity and 7.3% in value. Exports toward the world appear weaker in physical terms, decreasing by 2.9% for Europe and remaining almost unchanged for Italy (-0.0%); however, values instead continued to grow, by 4.5% for the EU27 and 5.4% for Italy. Before 2025, the States, according to the analysis, still appeared to be a relatively dynamic destination, especially because exports to the U.S. performed better than benchmark exports in quantity terms.

The 2025 evidence, however, suggests a loss of momentum in the U.S. market. EU27 exports to the United States fell by 7.7% in quantity and 4.3% in value since 2024, while Italy recorded a similar score with a loss in quantity (-8.0%) but still reported a slight increase in the value of exports to the USA (+2.7%). This suggests that the recent losses are quantity-driven, with nominal growth still benefiting from increases in average values or a favorable export composition. A comparison with the reference market (benchmark) is also useful. EU27 machinery exports to the reference market decreased less in quantity in 2025 compared to 2024 (-2.2%) and still increased in value (+1.1%), while Italy's exports to the reference market performed even better, with stable quantities (+1.1%) and values (+0.7%).

This suggests that the recent losses are more clearly concentrated in the U.S. market than in total machinery exports.

A point that reinforces this paragraph is given by the weight of US exports in the world, the share. For the EU27, the U.S. share of total machinery exports by value is substantially stable between 2016 and 2017-2020, moving from 17.41% to 17.40%, before rising to 20.5% in 2024 and then falling to 19.4% in 2025. For Italy, the corresponding share is lower but remains substantially stable, passing from 11.1% in 2016 to 11.3% in 2017-2020, then to 11.4% in 2024 and 11.7% in 2025. Italian dependence on the United States is less sharp compared to the EU, whose exports are more volatile. This sector, in conclusion, does not show signs of collapse; however, physical exports undergo a slowdown toward the US, only partially compensated by value dynamics.

Table 10 – Machinery Export Changes

Period	Exporting entity	US quantity change	US value change	Benchmark quantity change	Benchmark value change
2016 vs 2017–2020	EU27	4,4%	4,4%	-2,9%	4,5%
2016 vs 2017–2020	Italy	7,8%	7,3%	0,0%	5,4%
2024 vs 2025	EU27	-7,7%	-4,3%	-2,2%	1,1%
2024 vs 2025	Italy	-8,0%	2,7%	1,1%	0,7%

4.1.6 Pharma

The pharmaceutical sector, also called the control sector, is the most expansionary among all those examined, which, together with not being subject to tariffs, is the reasons that make it perfect for this position. Unlike other sectors, it shows no sign of giving way in 2025. Even in the past, it reported remarkably high growth, especially toward the United States. Between 2016 and 2017-2020, EU27 exports to the United States increased by 30.4% in quantity and 45.2% in value, while Italian exports grew by 76.4% in quantity and 163.4% in value. The benchmark sector, i.e., the rest of the world, also grew, but not at American levels: for the EU27, benchmark exports increased by 12.4% in quantity and 27.5% in value, while for Italy, they increased by 6.8% in quantity and 38.3% in value. This confirms that it was already one of the strongest sectors even before recent vicissitudes, with especially marked dynamism toward the U.S. market.

If we look at the 2024 and 2025 data, we note exactly the confirmation of what was just said. EU27 exports to the United States increased by 18.2% in quantity and 32.6% in value, while Italy recorded even more consistent increases, with exports toward the United States growing by 21.2% in quantity and 54.5% in value. For EU27, reference exports increased by 1.8% in quantity and 16.0% in value. Italy shows a more contrasting trend outside the United States, as the reference quantity decreased by 6.5%, while the reference value nonetheless increased by 29.0%, reflecting lower growth standards. This does not change the fact that the sector stands out from the others for its positive trend, a sector that shows continuous expansion, especially toward the United States.

At the same time, it is one of the areas with the strongest divergence between value and quantity changes, which requires a certain caution in interpretation. The increase in the unit value proxy is exceptionally strong for both the EU27 and Italy, especially on the U.S. side, which suggests that nominal growth is significantly stronger than physical growth. This implies that the sector cannot be seen as a sector with a purely proportional expansion in terms of quantity. On the contrary, it combines real growth with a strong increase in the average value per unit, likely linked to the high-value nature of the pharmaceutical trade.

The United States is also becoming increasingly important over time in a structural sense. In value terms, the share of U.S. exports on the benchmark rises from 27.0% in 2016 to 30.8% in 2017-2020, then to 38.3% in 2024 and 43.8% in 2025 for the EU27, and from 8.8% to 16.8%, then to 19.2% and 23.0% for Italy. The pharmaceutical sector is the one with the strongest export performance in the entire dataset and can thus be seen as a useful benchmark against which the weaker and more unstable sectors should be evaluated.

Period	Exporting entity	US quantity change	US value change	Benchmark quantity change	Benchmark value change
2016 vs 2017-2020	EU27	30,4%	45,2%	12,4%	27,5%
2016 vs 2017-2020	Italy	76,4%	163,4%	6,8%	38,3%
2024 vs 2025	EU27	18,2%	32,6%	1,8%	16,0%
2024 vs 2025	Italy	21,2%	54,5%	-6,5%	29,0%

Table 11 – Pharma Export Changes

4.1.7 Total export flows by reporting entity

In the total or aggregate section, we see that there are discrepancies in exports toward the United States; especially, value and quantity often do not move in the same direction. Between 2016 and 2017-2020, Italy gained market share in the United States. EU27 exports to the United States increased by 7.7% in quantity and 14.3% in value, while Italian exports grew by 19.7% in quantity and 15.8% in value. For exports toward the rest of the world, the story is different; in fact, they are weaker in physical terms, as quantities for the EU27 increased only marginally (+0.4%) while for Italy they decreased by 3.1%. However, values increased in both cases, by 8.7% for the EU27 and 9.7% for Italy. Before 2025, the United States therefore still appears to be a dynamic destination for both areas under consideration, more clearly for Italy in relative terms.

However, in the period between 2024 and 2025, there seems to be a different trend, with exports from both areas seeming to decrease in physical terms, but with values increasing. This divergence between falling quantities and rising values indicates that export nominal values may have been, to some extent, underpinned by increasing average unit values. This finding must be handled with care because an upward trend of this sort could result from inflationary effects in addition to other factors. It conforms well to the prevailing state of affairs within the euro area, where inflation had fallen from its 2023 peak but continued to rise in 2024 (Lane, 2024). In the case of the EU27, exports to the United States decreased by 9.7% in terms of quantity but increased by 3.6% in terms of value. Italy shows an even more marked divergence, with exports toward the United States down by 10.3% in terms of quantity, but up by 7.2% in terms of value. Instead, importantly, exports toward the world were more stable, with Italy increasing quantities by 1.3% and value by 3.3%. For the EU27, benchmark exports decreased by only 1.6% in quantity while still increasing by 1.9% in value. Recent trends are therefore not characterized by strong quantity-driven growth, but rather by a resilience determined by prices or the product mix. Conversely, toward the States, a weakening is noted.

This interpretation is supported by the unit value proxy, which shows a strong upward trend over time, especially for exports directed toward the United States. Furthermore, the data do not support the idea that Italy is structurally more dependent on the U.S. market compared with the EU27 aggregate. On the contrary, the share of the total export value to the U.S. is

lower for Italy than for the EU27 over the entire sample period, even though export volatility to the U.S. market is higher for Italy. More specifically, the U.S. share of total export value rises from 16.5% in 2016 to 17.4% for the EU27 in 2017-2020, and from 8.8% to 9.3% for Italy; in 2025, it reaches 21.0% for the EU27 and 10.8% for Italy. In short, the aggregate data do not support the idea of an export collapse in simple terms but rather support the idea of a more complex behavior in which the U.S. market is present in terms of revenue but not in terms of physical quantities in the recent period. As an introductory section of the chapter, aggregate data are useful for providing the general background against which more specific sectoral-level differences can be understood.

Period	Exporting entity	US quantity change	US value change	Benchmark quantity change	Benchmark value change
2016 vs 2017–2020	EU27	7,7%	14,3%	0,4%	8,7%
2016 vs 2017–2020	Italy	19,7%	15,8%	-3,1%	9,7%
2024 vs 2025	EU27	-9,7%	3,6%	-1,6%	1,9%
2024 vs 2025	Italy	-10,3%	7,2%	1,3%	3,3%

Table 12 - Aggregate Export Changes

4.2 Econometric Analysis: DiD Framework

Following the descriptive analysis, an econometric analysis in R is performed as the quantitative part. This further analysis does not aim to identify a causal effect in the strict econometric sense fully, but rather to formally test the general sectoral pattern already observed in the descriptive analysis using a Difference-in-Differences (DiD) framework. More specifically, it examines whether the various sectors, more or less exposed, perform differently compared to the pharmaceutical sector, which, according to the data and what emerged in the descriptive analysis, shows itself to be the most resilient and expansive among those analyzed.

4.2.1 DiD specifications

As the first analysis, a baseline difference-in-differences model is carried out, briefly called DiD.

First period

First, it is estimated for the years 2016-2020, where 2016 is used as the pre-period, and the years from 2017 to 2020 as the post-period, which are indeed associated with President Trump's first term. In this case, the variable used as the dependent one is the `log_share`, thus the logarithm of the United States' share. As anticipated, the pharmaceutical sector is used as the control sector, while the other sectors are classified as treated. Year and reporter fixed effects are included, and standard errors are clustered at the sector level.

The coefficient of the interaction term between being treated and the post-period is negative and statistically significant ($\beta = -0.295$, $p = 0.001$). In substantive terms, this means that, since 2016, the treated sectors achieved a share of exports to the United States approximately 25–26% lower compared to the pharmaceutical sector within the reference sector (benchmark). Therefore, this result is consistent with the descriptive analysis: during Trump's first term, the “more vulnerable” sectors might not have collapsed, but they performed worse than the pharmaceutical sector in their orientation toward the U.S. market.

It is important to emphasize that, as discussed in chapter three on methodology, this result cannot be interpreted as rigorous evidence of a negative impact of tariffs on the commercial behavior of such sectors, but only as an illustration of sectoral divergence relative to the reference group represented by the pharmaceutical sector. As previously observed, the pharmaceutical sector appears structurally more resilient and exhibits faster growth than the other sectors in the dataset.

Second period

Subsequently, a second DiD model was developed for the more recent period. This includes the years 2024 and 2025, where 2024 coincides with the last year of the Biden term and 2025 with the start of Donald Trump's second term, where consequently 2024 is the pre-period and 2025 the post-period. Here, too, the same variables indicated above are used.

The interaction coefficient between the treatment status variable and the 2025 post-period category is negative and statistically significant ($\beta = -0.163$, $p < 0.001$). In relative terms, it represents a difference of approximately 15% in the share of exports to the United States of the treated sectors compared to the pharmaceutical sector. The results, therefore, confirm that, compared to the pharmaceutical sector, the treated sectors continued to lag behind even during the most recent period.

However, the coefficient value is lower than the estimate from the 2016–2020 regression. This indicates that, although the gap continues to exist, it does not result in a larger gap compared to what was observed during the first period under the presidency of Donald Trump. The pattern, therefore, yields consistent support for the assumption of persistence rather than for an increasing divergence. Once again, the interpretation of the results is not immediate: the regression indeed analyzes all treated sectors in relation to a single benchmark represented by the pharmaceutical sector. Furthermore, there is only one year analyzed, and some of the effects could present themselves in 2026 or in the years to come.

Dependent variable: *log_share*. Control sector: pharmaceuticals—treated sectors: aluminum, food, iron & steel, machinery, beverages.

Variable	Period 1 (2016–2020)		Period 2 (2024–2025)		Dep. Var.: <i>log_share</i>
	Coeff.	Sig.	Coeff.	Sig.	Both periods
treated	–0.408	—	–0.836	*	Baseline gap vs. pharma
treated:post_trump1 / treated:post_2025	–0.295	**	–0.163	***	Key DiD estimate
Approx. % effect [$\exp(\beta) - 1$]	–25.6%		–15.0%		
Year FE	✓		✓		Both periods
Reporter FE	✓		✓		Both periods
SE	Clustered (sector)		Clustered (sector)		
N	720		288		
Within R²	0.148		0.295		

'—' in Sig. column for treated in Period 1 indicates $p = 0.207$ (not significant). *post_trump1* and *post_2025* are absorbed by year fixed effects and omitted from the specification.

Table 13 - Baseline DiD Results

According to the results, the hypothesis 1 is overall supported. In both periods, a statistically significant weakening in the U.S. export share is visible, when compared to the pharmaceutical sector. The results are therefore consistent with the expectation that tariff exposure is associated with a weaker export performance in the U.S. market.

4.2.2 Heterogeneity by exporting entity: Italy and EU27

In this section, another DiD model is performed, but specific to the reporter; two specifications for Italy and the EU27 are estimated in two different time windows. This serves to understand the relative divergence between the treated sectors and the control sector. This is a further useful analysis, as the pooled baseline shows negative signs for the treated sectors but does not indicate whether the pattern is equally visible in Italy and the

EU. One therefore verifies whether the pattern is shared between the two groups or if one of the two is more exposed.

First Period

The period 2016–2020 is now analyzed using the same division as before, and the dependent variable remains the same. The estimated interaction effect for the EU27 is -0.717392 with a p-value of 0.02789, while for Italy, the estimated effect is -0.686780 with a p-value of 0.06540. In both cases, the coefficient estimates are negative and of large magnitude from an economic perspective. In percentage terms, these estimates suggest a relative reduction of approximately 51.2% in the share of exports of the treated sectors compared to the pharmaceutical sectors in the U.S. market.

In substantive terms, this implies that, in both cases, during the first Trump administration, the treated sectors performed significantly worse than the pharmaceutical sectors. Once again, what is most relevant in the current context is not the small difference in sign between the two interaction estimates, but their similar magnitude. This implies that the relative gap between the sectors exposed to U.S. sanctions and the benchmark represented by the pharmaceutical sector does not constitute a specifically Italian phenomenon, but a broader trend observed also for the EU27.

The statistical precision, however, differs: the EU27 coefficient is significant at the 5% level, while the Italian coefficient is significant at the 10% level. This result should not be interpreted as a substantial difference. Rather, it can be said that there is more variability in the Italian data or lower precision given by a smaller sector. The significance of the difference is weaker than the similarity in terms of magnitude.

This analysis leads us to strengthen the idea of a weakening of the treated sectors when they are compared with the control sector, but it does not demonstrate a strong causal claim. It remains central that the divergence is relative, not solely due to tariffs.

Second Period

A second heterogeneity exercise was conducted for the recent period, limiting the sample to the years 2024 and 2025. In this case, 2024 represents the pre-period and 2025 the post-period. A cleaner specification was adopted that includes the baseline effect of the treatment, a treatment interaction for Italy, and separate post-2025 treatment effects for the EU27 and

Italy. This choice is preferable to a more mechanical, fully interactive specification, as it allows for better isolation of reporter-specific changes in the post-period while controlling for pre-existing differences between the treated sectors and the pharmaceutical sector.

The coefficient for `treated:reporterEU27:post_2025` is equal to -0.161678 with $p = 0.000312$, while the coefficient for `treated:reporterItaly:post_2025` is equal to -0.164930 with $p = 0.004424$. In percentage terms, these results imply a relative reduction of approximately 14.9% for the EU27 and 15.2% for Italy in the share of exports to the United States of the treated sectors compared to the pharmaceutical sector between 2024 and 2025.

In this case, a similarity of the coefficients is noted, even stronger than in the first period. Both are negative, significantly relevant, and almost identical, showing the slowed performance of the treated sectors and that it is shared in both the EU27 and Italy. Furthermore, the coefficient relative to the variable `treated:reporterItaly` is equal to -0.188597 and is not statistically significant ($p = 0.596239$), which suggests that the pre-existing gap between treated and pharmaceutical sector is not significantly different between Italy and the EU27 in this short recent period.

It seems safe to conclude that the difference observed in 2025 compared to the pharmaceutical sector shows high consistency across all reporters. However, it seems correct to admit that the recent effect was certainly lower than that calculated for the first phase under the Trump presidency. This clarification is essential. The recent effect can indeed be considered significant; however, it does not seem to exceed that of the first phase between 2017 and 2020 compared to 2016. In other words, the only logical conclusion is that the effect has continued to persist without intensifying.

Such information can be useful in the context of the thesis, as it provides further interpretive insights into the issue. At the same time, it would certainly be excessive to describe the more recent situation as an unprecedented worsening compared to the previous one. All that can be stated is that the same basic discrepancy remains: the performance of the pharmaceutical sector exceeds that of the other sectors in the context of a greater focus on the U.S. market.

Period 1: `treated:post_trump1:reporter` specification. Period 2: cleaner specification including `treated:reporterItaly` to control for pre-existing baseline gap between reporters.

Variable	Period 1 (2016–2020)		Period 2 (2024– 2025)		p-value P1	p-value P2
	Coeff.	Sig.	Coeff.	Sig.		
<code>treated:post_trump1:reporterEU27 / treated:reporterEU27:post_2025</code>	-0.717	*	-0.162	***	0.028	0.000

treated:post_trump1:reporterItaly / treated:reporterItaly:post_2025	-0.687	.	-0.165	**	0.065	0.004
treated:reporterItaly (pre-existing gap, Period 2 only)	—		-0.189	n.s. (p=0.596)	—	—
Approx. % effect – EU27	≈ -51.2%		≈ -14.9%		exp(β)-1	exp(β)-1
Approx. % effect – Italy	≈ -51.2%		≈ -15.2%		exp(β)-1	exp(β)-1
Year FE	✓		✓		✓	✓
Reporter FE	✓		✓		✓	✓
SE	Clustered (sector)		Clustered (sector)			
N	720		288			
Within R ²	0.137		0.298			

Within R² for Period 1 reporter model: 0.137. Within R² for Period 2 clean reporter model: 0.298.

Table 14 - Exporting Entity-Specific DiD Results

4.2.3 General decomposition

Decomposition is the mechanism that allows us to delve deeper into the mechanisms underlying the negative DiD coefficients in the baseline model. It allows us to understand the reason behind the lower performance of the treated sectors against pharma, and not stop at the result; we can understand if the divergence is associated with the relative unit value price or the quantity. In methodological terms, the relative variable `log_share` captures an orientation toward the American market more than the performance in absolute terms. Consequently, for consistency, the decomposition is based on `log_rel_quantity` and `log_rel_price`, rather than on the absolute export values to the States.

For the first period, comparing 2016 with the 2017–2020 period, the reference coefficient for “treated: post_trump1” in the “log_share” model is equal to -0.294525 ($p = 0.001331$), confirming a significant relative drop of the treated sectors compared to the pharmaceutical one. When considering the quantitative component, the coefficient on “log_rel_quantity” is equal to -0.196270 ($p = 0.010147$), while the coefficient on “log_rel_price” is equal to -0.098256 ($p = 0.135888$). From this, it emerges that the deterioration of the relative quantity component is the cause of the divergence in the first period analyzed. In this case, the relative price coefficient also moves in a negative direction, but it is not statistically significant. The treated sectors lose ground in comparison to pharma because the presence of physical exports decreases toward the United States, especially more so than unit prices do.

The second set of results, relative to the period between 2024 and 2025, provides an interesting perspective. First, in the regression on `log_share`, the baseline coefficient

associated with treated: post_2025 is equal to -0.163304 ($p = 0.000776$). Therefore, the relative underperformance persists even in recent years. The difference in this case is that the decomposition highlights different reasons behind the effect compared to the previous period. In particular, the coefficient associated with log_rel_quantity is equal to -0.260556 ($p = 0.0000625$) and is clearly negative, thus demonstrating a significant reduction in this variable, around -22.9%. On the other hand, the coefficient associated with log_rel_price is positive (+0.097252; $p = 0.003060$). This result is particularly important. It suggests that the lower relative orientation toward the U.S. market in 2025 does not derive from a weakness in prices compared to the pharmaceutical sector, around 10.2%. Therefore, the only possible explanation is a broader reduction in quantity, partially offset by improvements in unit prices.

Taken together, these results provide a substantial clarification regarding the interpretation of the econometric results. Contrary to the previous interpretation, according to which the divergence was largely attributable to value or price factors, the results suggest that the quantitative factor is more stable across the periods considered. In fact, the relative quantity indicator shows a stable negative coefficient in both periods, whereas the relative price indicator is unstable and changes sign in the recent period. From the perspective of the thesis, these are important results because they show that the relative weakness of the exposed sectors compared to the pharmaceutical sector cannot be explained by the existence of a single price disadvantage. On the contrary, it can be traced back to an inability to maintain a relative level of quantitative activity in the United States.

Decomposition of log_share into log_rel_quantity = $\log(\text{quantity_us} / \text{quantity_benchmark})$ and log_rel_price = $\log(\text{unit_price_us} / \text{unit_price_benchmark})$, where unit_price = value / quantity.

	log_share		log_rel_quantity		log_rel_price		Interpretation
Period / Variable	Coeff.	Sig.	Coeff.	Sig.	Coeff.	Sig.	Main channel
P1 – treated:post_trump1	-0.295	**	-0.196	*	-0.098	n.s.	Quantity driven (price: n.s.)
P2 – treated:post_2025	-0.163	***	-0.261	***	+0.097	**	Quantity driven; price partially offsetting
Year FE	✓		✓		✓		Both periods
Reporter FE	✓		✓		✓		Both periods
SE	Clustered (sector)		Clustered (sector)		Clustered (sector)		
N	720		720		720		P1
	288		288		288		P2

By construction: $\log_share \approx \log_rel_quantity + \log_rel_price$. Both periods: year FE and reporter FE included; SE clustered at the sector level.

Table 15 – General Decomposition Results

The results of this analysis show a relative weakening of tariff-exposed sectors, reflected mainly in the quantity component rather than in both components. Therefore, the findings partially support and refine Hypothesis 2. In both periods, the quantity coefficient is negative and statistically significant. By contrast, the price component is not statistically significant in Period 1 and becomes positive in Period 2.

4.2.4 Sector-Level Comparisons and Bilateral Decompositions

First period

In order to obtain a deeper understanding of the DiD results, a sector-by-sector analysis was conducted through the estimation of each bilateral specification. Each bilateral estimate is constructed as a comparison between each individual sector and the pharmaceutical sector, in terms of changes starting from 2016. This sectoral analysis is used to test whether the aggregate negative coefficient is due to the fact that all sectors follow a similar path or, alternatively, if their behavior differs significantly from that of the pharmaceutical sector. The interpretation remains comparative and must not be understood in a causal sense, as each bilateral regression estimates the behavior of the sector relative to the pharmaceutical sector in the 2016–2020 period.

The results clearly show that there is no uniform effect across all sectors. In fact, the interaction coefficient associated with `treated: post_trump1` in the `log_share` model for the sectors mentioned above is -0.121258 for aluminum, -0.276414 for the food sector, -0.374980 for iron and steel, -0.346473 for machinery, and -0.353501 for beverages. These values translate into relative reductions of 11.4%, 24.1%, 31.3%, 29.3%, and 29.8%, respectively. All sectors show a negative trend in relative terms compared to the pharmaceutical sector, although the intensity of the effect varies. Aluminum appears as the weakest and most ambiguous case, while iron and steel, machinery, and beverages show the most marked divergence. The food sector also shows a clear negative effect, though slightly less pronounced than the previous group.

The bilateral decomposition sheds light on the underlying mechanisms explaining the gaps between these sectors. Compared with the pharmaceutical sector, the relative quantity coefficient for iron and steel is -0.326962, whereas the relative price coefficient is only -

0.048018. The same dynamic is observed for machinery: $\log_rel_quantity$ is equal to -0.273331, while $\log_rel_price$ is more contained, equal to -0.073142. Similarly, the pattern for the food sector is identical: $\log_rel_quantity$ is equal to -0.193926 and $\log_rel_price$ to -0.082489. Overall, all three sectors suggest that the relatively weaker performance compared to the pharmaceutical sector during the first phase of the Trump presidency can be attributed mainly to a weakening of the quantitative component, rather than to a marked decline in relative unit values. In other terms, these sectors underperform due to a reduced quantitative presence in the U.S. market compared to the pharmaceutical sector.

The beverages sector, however, is quite distinctive in its behavior. Its negative coefficient on $\log_share$ is equal to -0.353501, while the coefficient on $\log_rel_quantity$ is almost non-existent (-0.042970), although the coefficient on $\log_rel_price$ is strongly negative (-0.310530). Consequently, the relatively weaker performance of the beverages sector is not linked to a significant decline in quantities compared to the pharmaceutical sector, but rather to a deterioration in relative prices or unit values. In substantive terms, this makes the beverages sector the only one that most closely resembles the initial intuition according to which sectoral underperformance might reflect a lower capacity for value extraction or a weaker positioning, rather than a simple contraction of the physical intensity of exports.

Bilateral estimates: each treated sector vs. pharmaceuticals. Dependent variables: $\log_share$, $\log_rel_quantity$, $\log_rel_price$. Post variable: $post_trump1$.

Sector	log_share			log_rel_quantity		log_rel_price	
	Coeff.	Sig.	Approx. %	Coeff.	Sig.	Coeff.	Sig.
Aluminum	-0.121	n.s.	-11.4%	-0.144	n.s.	+0.023	n.s.
Food	-0.276	**	-24.1%	-0.194	*	-0.082	n.s.
Iron & Steel	-0.375	***	-31.3%	-0.327	**	-0.048	n.s.
Machinery	-0.346	***	-29.3%	-0.273	***	-0.073	n.s.
Beverages	-0.354	***	-29.8%	-0.043	n.s.	-0.311	.
Year FE	✓						
Reporter FE	✓						
SE	Heteroskedasticity-robust						
N (per bilateral model)	240 (sector vs. pharma)						
Note: Beverages are the only sector where log_share is driven by log_rel_price (-0.311, p=0.055) rather than log_rel_quantity (-0.043, n.s.).							

Approx. % effect = $\exp(\beta) - 1$. Bilateral models use heteroskedasticity-robust SE. N = 240 per model (sector + pharma, 5 years: 2 reporters: 12 months).

Table 16 - Sector-Level Decomposition Results: Period 1

Second period

The same sectoral logic was then applied to the most recent comparison, using 2024 as the reference period and 2025 as the observation period, with the same scope of application.

This step helps us confirm that the divergence is not equal across sectors, even if the general pattern remains rather negative.

The bilateral log_share models show that all four sectors considered in the decomposition continue to underperform compared to the pharmaceutical sector in relative terms. The estimated interaction coefficient treated: post_2025 is equal to -0.150014 for the food sector, -0.234508 for iron and steel, -0.139185 for machinery, and -0.191153 for beverages. In approximate percentage terms, these values correspond to relative reductions of about 13.9%, 20.9%, 13.0%, and 17.4%, respectively. If compared with the previous phase, we see here that the magnitudes are somewhat smaller. This aligns, however, with what was stated previously, namely that there is a continuity of this pattern but not a worsening. The iron and steel sectors remain the most affected, while food and machinery deteriorate less. Beverages, instead, appear to be a particular case rather than a neutral one.

However, the decomposition also adds a further interpretive aspect. Regarding iron and steel, the drop in log_share is largely linked to the quantitative component, as log_rel_quantity is equal to -0.334638, while log_rel_price is equal to 0.100130 and is therefore not significant. The same applies to the analysis of the beverages sector (log_rel_quantity = -0.222263; log_rel_price = 0.031110) and the food sector (log_rel_quantity = -0.245045; log_rel_price = 0.095031), which implies that only the first component is associated with negative variations. Overall, in each case, the quantitative component appears negative, while the price component results are contained or even positive.

Finally, the logic underlying recent changes in the machinery sector appears similar yet also exhibits nuances. Indeed, for machinery, log_share is equal to -0.139185, log_rel_quantity is equal to -0.280391, and log_rel_price is equal to 0.141206, which implies that while the relative quantitative position of machinery deteriorates, its relative price increases to a certain extent. Therefore, it can be concluded that the position of the machinery sector worsens due to a reduction in its relative quantitative position within the U.S. market, rather than as a result of prices.

Taken together, these sector-level results support the main interpretation of the recent period. It is important to emphasize that the negative aggregate estimate is not due to a single anomalous sector. Equally relevant, however, is the fact that the bilateral decomposition analysis has revealed a surprisingly robust pattern for all sectors involved: in the 2024–2025

comparison, the relative reduction in export competitiveness of the treated sectors compared to the pharmaceutical sector occurs mainly due to the quantitative dimension, while the price effect remains constant or even operates in the opposite direction. In other words, the recent period cannot be explained through a simplistic narrative of “price problems.” On the other hand, it is a phase in which the relative performance of the unit values of the sectors examined seems to remain stable, or even improve, while the physical quantity of exports decreases more rapidly compared to that of the pharmaceutical sector.

This is a significant result for the present thesis, as it ensures consistency between the sector-level analysis and the results of the broader decomposition analysis discussed previously. The common factor in the recent period is not a generalized reduction in value extraction by a particular sector, but rather a relative reduction in quantity. Therefore, the success of the pharmaceutical sector is not due to the fact that it manages to obtain higher values, but to its ability to maintain or increase its presence in terms of quantity in the U.S. market. However, it is necessary to still exercise caution in the analysis of these results, as they cannot be interpreted as causal results.

Bilateral estimates: each treated sector vs. pharmaceuticals. Dependent variables: log_share, log_rel_quantity, log_rel_price. Post variable: post_2025.

Sector	log_share			log_rel_quantity		log_rel_price	
	Coeff.	Sig.	Approx. %	Coeff.	Sig.	Coeff.	Sig.
Aluminum	-0.102	n.s.	n.s.	not est.	—	not est.	—
Food	-0.150	*	-13.9%	-0.245	*	+0.095	n.s.
Iron & Steel	-0.235	*	-20.9%	-0.335	.	+0.100	n.s.
Machinery	-0.139	*	-13.0%	-0.280	***	+0.141	*
Beverages	-0.191	*	-17.4%	-0.222	*	+0.031	n.s.
Year FE	✓						
Reporter FE	✓						
SE	Heteroskedasticity-robust						
N (per bilateral model)	96 (sector vs. pharma)						
Note: Aluminum excluded from decomposition (treated:post_2025 n.s., p=0.44). In Period 2, log_rel_price is positive or n.s. Across all sectors, the adjustment channel is consistently quantitative.							

Approx. % effect = $\exp(\beta) - 1$. Bilateral models use heteroskedasticity-robust SE. N = 96 per model (sector + pharma, 2 years: 2 reporters: 12 months).

Table 17 - Sector-Level Decomposition Results: Period 2

4.2.5 Overall considerations

On the whole, the econometric results are consistent with a relative divergence between the two groups of sectors but do not indicate any causal relationship. With respect to both time periods, the baseline DiD models reveal relatively weaker performance of treated sectors compared to pharmaceuticals in the context of relative export orientation toward the U.S., with the effect much more pronounced for the former and significant in the latter case. The reporter-specific models make it possible to conclude that the result is not confined to the Italian experience only, but also manifests itself when the EU27 countries are analyzed. The robustness check, carried out by changing the denominator in the regressions, demonstrates that the principal result is not influenced by the specific choice of the benchmark sector in the initial model. The findings of the decomposition exercise provide further clarity by showing that the principal channel of adjustment is quantity, since the relative weakening of treated sectors is driven predominantly by a deterioration in their relative export quantities rather than in relative unit values. Finally, it should be emphasized that the heterogeneity among sectors becomes especially clear in sector-by-sector comparison.

5 Qualitative findings

5.1 Prices, margins, and bargaining power under tariff pressure

First-order concepts	Second-order themes	Aggregate dimension
“We could not lower prices”; “there were no significant margins left”; “we had already minimized the selling price.”	Limited pricing flexibility and margin compression	Prices, margins, and bargaining power under tariff pressure
“The distributors absorbed the cost”; “5% absorbed by us and 5% by the importer”; “American consumers paid the increase”	Shared absorption of tariff costs along the value chain	
“Tariffs became a commercial lever”; “importers asked for discounts because of tariffs.”	Tariffs as bargaining leverage	
“We protect the brand value”; “discounts only if linked to higher volumes”; “not willing to sell at a loss.”	Brand protection and selective price concessions	

Table 18 - Prices, Margins and Bargaining Power

For the first aggregate dimension, we consider how firms have managed periods of uncertainty and tariffs through prices, margins, and bargaining relations with importers or distributors. Although the tariff normally adds to the final price and is paid by consumers, in the interviews, it does not emerge as a mechanical cost that can be added to the final price or absorbed entirely by the exporting firm. In the answers, a relationship and negotiating process emerged. Upon the introduction of tariffs, firms look to see if there is a margin for price reduction, and if the additional cost of the tariff can be distributed to importers or distributors. It also emerges that evaluating the maintenance of the value of the product is more important than preserving the sales volume at all costs.

The first recurring theme is certainly that of evaluating the margin for the reduction of prices. In interview one with Di Carlo Confetti, the tactic of keeping prices low to avoid a higher price in the destination market emerges. The rationale behind this decision is rather commercial. Consumers are not necessarily familiar with the product, which requires keeping prices contained so as not to be penalized in sales. As the interviewee explained, the company “could not intervene by lowering prices” because it no longer had significant margins to compensate for the increase in tariffs. As clearly emerged from the interview with them:

“Non c’erano grossi margini per compensare da parte nostra. Lo hanno fatto i nostri distributori.

There was not much margin left for us to absorb the additional cost. Our distributors did so instead.” (William Di Carlo)

In that case, the additional cost was absorbed mainly downstream by the US distributors, who did not raise particular objections and apparently managed to cope with the increase.

A partly similar problem emerged in the interview with Peperoncino S.r.l. / Cantina Valle Tritana, where tariff pressures directly influenced the profitability of the firm due to its high dependence on the US market (about 70% of the turnover). According to the interviewee, the additional tariff burden was split between the company and the importer at 5% each to avoid a further increase in prices for the final consumer, which led to a decrease in the net margin from 18% to 13%. Therefore, the case shows that, while the absorption of tariffs does not necessarily involve an exit from the market, it can be rather costly for firms that depend strongly on sales in specific countries and want to maintain their market presence. A similar dynamic emerged from the interview with Pro Pizza. They started selling in the USA just before the tariffs were released, but they were not able to shift the cost completely to the customer. The solution was again in the middle, talking about a 10% tariff, five percentage points absorbed by the company and five by the customer. This confirms that the incidence of the tariffs also depends on timing, highlighting the necessity of protecting the new customer.

The second theme concerns the distribution of costs along the chain from production to consumption, where the impact of tariffs on export performance is determined not only by the export firm itself, but also by the participation of intermediaries (importers, distributors),

as well as final consumers. In the interview with William di Carlo, the tariff costs were transferred entirely to the distributors. According to Ursini, in the final analysis, the additional tariffs increased product prices in US markets, which were ultimately borne by consumers. Simultaneously, the interviewee recognized that it was useful every now and then to provide discounts, where possible, to meet customers' needs and facilitate the sales process. This shows that tariffs do not impact everyone in the same way; part of the cost could be absorbed by customers, part by the importer or distributor, and a part by the exporting company if there are the margins to allow it. Interview with Pro Pizza also notes that the nominal tariff rate may underestimate the actual pressure firms perceive. According to Pro Pizza, a tariff of 10–15% was manageable in isolation, whereas the combined effect of tariffs and dollar depreciation was much more relevant, especially for lower-margin products. It is what they wanted to emphasize:

“Il dazio fino a che sono 10, 15 punti è relativo. Piuttosto, il problema è stato l’effetto combinato tra il dazio e la svalutazione del dollaro. [...] Se metti insieme tutti e due, l’effetto combinato è del 25%. Tanta roba su prodotti poveri.

A tariff of 10 or 15 percentage points is relatively manageable. The real problem was the combined effect of the tariff and the depreciation of the dollar. [...] If you put the two together, the combined effect is 25%. That is substantial for low-margin products.”
(Pro Pizza)

In this case, the perceived pressure did not derive only from the tariff itself, but from its interaction with exchange-rate movements.

The third theme concerns how companies use tariffs as leverage. In the interview with Nova Ripa, this is very visible. The company did not report any direct effect from the American tariffs on prices, volumes, or margins, and this is partially explained because their product is a product that is placed in the medium-high segment, and the company seeks to protect the brand value. It emerges from the interview that for them, the request for discounts by importers was not due to the tariffs, but was a pretext for further discounts; tariffs represent a means of negotiation, not just the cost. The company's response was negative: it would not reduce prices at the request of importers, but only if they had asked for larger volumes. Even with the limited impact in this case, tariffs can act as a tool of negotiation; it is an important finding of this affair.

The fourth theme, instead, is represented by the will of companies to protect the product and the brand value. Still in the interview with Nova Ripa, this detail emerges: the refusal to grant new discounts reflects a desire to protect the brand and product, as the interviewee says, positioning them as medium-high products. Similarly, Spinelli Vini described the tariffs as a cost that can be calculated and integrated into the commercial negotiations, rather than as an element that automatically involves a radical change in the strategy of price determination. For the more structured and diversified firms, the pressure from tariffs appeared more manageable, since it could be considered one of the variables in determining export prices.

Overall, however, the analysis shows that the impacts of tariffs did not involve automatic price adjustments but differentiated impacts. Firms with strongly compressed margins had no space to further reduce prices. Exposed firms such as Peperoncino S.r.l. (brand: Cantina Valle Tritana) accepted a direct reduction in profitability to compete in the American market. Other firms transferred part of the costs to importers or distributors, or transferred the price increase onto consumers. In firms with better-positioned products, the responses became more cautious, considering the importance of protecting the brand value as well as avoiding making too many sacrifices. The interview data do not allow us to identify a single trend towards price adjustment, but tariffs have become a factor in negotiated reallocation of costs.

5.2 Strategic moderation and planning under trade policy uncertainty

First-order concepts	Second-order themes	Aggregate dimension
“Stability is fundamental”; uncertainty makes firms “think a few more times” before investing; policy changes can emerge suddenly.	Uncertainty as a constraint on medium- and long-term planning	Strategic moderation and planning under trade policy uncertainty
Decision not to attend the Fancy Food fair in New York; reduction of costly promotional activities; postponement of non-urgent internal investments	Deferred or selective investment under uncertainty	

“It is not a real wait-and-see, it is simply committing less”; “next year we aim to return”; continued presence despite lower margins	Wait-and-react rather than full withdrawal	
Difficulty obtaining forecasts from U.S. partners; shorter validity of price lists; frequent revision of business plans	Flexible planning and forecast dependence	

Table 19 - Strategic Moderation and Planning

Regarding the second aggregate dimension, this concerns how companies have modified the way they plan and commit during periods of TPU. From the interviews, it emerged that uncertainty often creates more problems than a tariff. The tariff, even if it increases costs, can be included in calculations or negotiations and distributed among the subjects of the value chain. On the contrary, uncertainty influences companies in their planning, investing, or promoting, which also impacts their efforts to face the American market.

The first theme that is noticed is that of reducing commitment in long- or medium-term plans. It clearly emerged from the interview with Ursini, which explains that the tariff rate was not a problem as much as the political instability that gravitates around it. Stability, according to the interviewee, would be fundamental not only to guarantee monetary investments but also in terms of time, resources, or attention. In the same way, he underlines that this is also connected to other sources of volatility, such as current geopolitical events. This can lead to an increase in shipping costs, making the company lose profitability, especially for agreements in place at that moment. This vision of his gives us a way to see uncertainty as part of a larger, unstable environment, rather than as a variable that complicates planning.

A second theme that emerges, under this aggregate dimension, is the reduction or shifting of commercial commitments or investments. Still in the interview with the company Ursini, one notices the decision this year to renounce participation in the “fancy food” fair in New York, described as a particularly important event for the company and the food market in America. The uncertainty and exposure to tariffs led to non-participation. As they have stated directly.

“Quest’anno non parteciperemo alla fiera al Fancy Food [...] una fiera molto importante, quasi cruciale [...] hanno influito talmente tanto questi dazi e questa incertezza della politica da farci rinunciare a una fiera nel paese più interessante del mondo.

This year we will not participate in the Fancy Food fair [...] a very important, almost crucial fair [...] tariffs and policy uncertainty have affected us to such an extent that we decided to give up a fair in the most interesting country in the world.”
(Ursini)

In jargon, it is called strategic moderation, which is not abandoning the market but reducing its commitment. Obviously, it is not a choice without risks, as one loses visibility and opportunities that competitors can seize, says the interviewee. These actions are therefore not without costs, but cautious responses that can involve opportunity costs.

This pattern is also noticed in the interview with the winery Nova Ripa. They also tell us that the tariff in itself did not have any heavy impact on prices or volumes, but uncertainty leads to reduced commitments and the aggressiveness with which one attacked the American market. Without this policy of hostile uncertainty, they would have pushed more towards this market, through fairs, promotion, and even a new brand to launch. It is clear from their words:

“Con meno ostacoli, mi sarei riferita a questo come mercato principale [...] Tant’è che noi abbiamo una linea che, quando l’ho creata a livello di brand awareness, l’ho pensata proprio per loro, per il mercato americano. [...] Però, appunto, per queste ragioni e incertezze, nessuno ha voglia di investire e promuovere una linea del genere, un marchio nuovo.

With fewer obstacles, I would have treated this as a primary market [...] We even have a product line that, when I developed its brand awareness, I designed specifically for the American market. [...] However, because of these obstacles and uncertainties, no one is willing to invest in and promote such a line, a new brand.”
(NovaRipa)

For the reasons aforementioned, they preferred to be cautious and wait, focusing on optimization and attention to more predictable and manageable markets. Even if it was not the tariffs that directly damaged the company, the American market has become less urgent, and it has lost the commitment that companies had.

In the interview with Valle Tritana, there is a different but important logic. It is a small company with about 70% of the sales in America, and reducing the presence is not easy. So, for them, the uncertainty has led to not detaching from the American market. Being particularly important for them, they cannot abandon it, and the investments persist. However, some investments, such as the purchase of some equipment, were postponed. This case demonstrates that heavy reliance on the US market can limit the feasibility of a strategic withdrawal, but uncertainty can nonetheless influence internal investment decisions and liquidity allocation.

The third theme is the contrast between the complete withdrawal and a more moderate approach. The interview with William di Carlo has clearly rejected any notion of a real wait-and-see strategy. While responding to the requests of American consumers as they presented themselves, the company did not actively seek new customers and did not promote itself in the market. As the interviewee stated, it was not a true waiting strategy but rather “committing less”. This nuance is crucial, as not all firms have formally interrupted the decision-making process due to uncertainty; rather, their reactions have been less radical: reduced activity, less aggressive initiatives, and a greater focus on other markets.

Spinelli Vini has given a significant contribution to this theme, although from the perspective of a larger firm. In the first place, uncertainty was never perceived by the company as a shock that required radical measures. On the contrary, it was considered an ordinary part of any export activity. The interviewee identified different sources of uncertainty, such as exchange rates, geopolitical conflicts, transport problems, and international conflicts. However, this does not imply stability in business plans. It seems rather the opposite, as according to this interview, business plans should be adapted regularly.

The fourth theme concerns the increasingly significant role of forecasts and planning mechanisms. It was identified in relation to the interviews on the necessity of obtaining information on the back label from American customers in the interview with William Di Carlo. The exporter required forecasts in order to guarantee efficient production. It is noteworthy that the prospect of an increase in prices motivated importers to provide more accurate forecasts, in order to lock in current conditions before future changes can occur. In this example, uncertainty generated difficulties but also encouraged better communication and cooperation with the importing counterpart. Therefore, planning under conditions of

uncertainty requires cooperation not only of the exporting organization but also of its trade partners.

Finally, the uncertainty has encouraged the firms to reduce the level of commitment and the rigidity of their plans. As stated in the interview with Ursini, it has become necessary to reduce the validity period of price lists, as changes in transport costs and external conditions make it impossible to guarantee the same level of reliability as in previous years when preparing annual lists. Furthermore, the creation of a dedicated production line or a range of products for the American customer was proposed only in the case in which the customer guaranteed the purchase of all goods produced. This illustrates a practical form of risk control: firms do not necessarily reject opportunities but seek to avoid commitments that would leave them exposed in the case of market changes.

The analysis highlights that uncertainty did not produce a single response but rather a series of heterogeneous strategic adaptations united by a prudent approach that excludes exiting the market. Although firms responded in differentiated ways, from reducing investments to reorganizing activities to integrating uncertainty into formal planning, the attractiveness of the United States remained more or less constant. It follows that the instability influenced the form and intensity of the commitment exclusively, translating into a more cautious involvement on a reduced scale, without, however, compromising the will to continue operating in the American context.

5.3 Market exposure, diversification, and dependence on importers

First-order concepts	Second-order themes	Aggregate dimension
U.S. market around 70% of turnover; U.S. around 8% of turnover; U.S. around 5% of sales; “one of many markets”; no current direct U.S. exposure	Heterogeneous exposure to the U.S. market	Market exposure, diversification, and dependence on importers
U.S. market as “too important” or “difficult to stay away from”; U.S. as non-core or not currently active	Different degrees of strategic dependence	
Loss of previous U.S. importer; historical importer relationship; distributors in the U.S.; importers in Michigan and Florida	Importers and distributors as market-access gatekeepers	
Attention to alternative markets: Europe, Canada, Asia, Albania, Brazil, India, Russia, UK, Far East; diversification as protection	Diversification as risk management	
Continued interest in the U.S. despite uncertainty; search for a new importer; willingness to return to fairs or expand if conditions improve	Market reorientation without full U.S. abandonment	

Table 20 - Market Exposure, Diversification and Importer Dependence

The third aggregate dimension is composed of the role of exposure in the American market, diversification, and dependency on importers in interfering with the strategic responses of firms. The companies interviewed, being quite different from each other in terms of product and dimensions, are not subject to the same conditions of tariffs and uncertainty, with exposure also being very different. Some make the USA market the main one, for others, it counts like the others, and some are no longer part of it. These are all conditions that make one company respond differently from another.

The first theme is the heterogeneity of exposure to the United States market. Cantina Valle Tritana is the most exposed company among those interviewed, with about 70% of sales. For them, it is difficult to replace the American market in the short term, so they decide to continue to invest in it, albeit with reduced margins. Different is the discourse for Nova Ripa and Spinelli Vini, for whom the American market accounts for about 5% and 8% respectively, and the dimensions are considerably larger. It is a market that is certainly relevant but not dominant, and this allowed for reduced exposure and a more cautious approach. The interview with Di Carlo instead shows a different position, putting it on par with others, such as Germany, Czechia, or Russia. For them, this is a choice, not a consequence, as over time, uncertainty and tariffs have increased, as have operational frictions with the FDA reports. This has led to maintaining relationships with historic clients and their requests without direct promotion or investment. Furthermore, the ease of obtaining information nowadays was emphasized, making it possible to enter other markets with fewer obstacles. Citra Vini reports a particular case: they were once strong in the United States until about eight years ago, and after losing their importer, they exited. It could have been a stroke of luck, because for this reason, they did not suffer the effects of tariffs or uncertainty relative to America. This interview remains valid because it presents a different scenario: remaining competitive in a strong market like the American market depends not only on demand or the product but also on having a reliable distributor. Currently, they are in search of a new importer, with the American market remaining important for them. As evidenced by their words:

“Nonostante abbiamo il problema dei dazi con gli Stati Uniti, noi stiamo cercando di trovare comunque un nuovo importatore per gli Stati Uniti.

Despite the tariff issue with the United States, we are still trying to find a new importer for the U.S. market.” (Citra Vini)

A second recurring theme is that the strategic importance of the United States market is not necessarily in line with its relative weight within the sales portfolio. In the interview with Ursini, the American market was cited as one of the main reference markets for Italian food exporters, thanks to its size, purchasing power, diversity, and receptiveness to high-end Italian products. Although this year the company decided not to participate in the Fancy Food fair, it was clear that the American market was still sufficiently significant from a strategic point of view for the company. As Nova Ripa stated, in a less uncertain and more

predictable context, the company would have been willing to allocate more resources to developing the United States market through fairs and promotional activities, as well as to developing a product line better suited to American clients.

In the third place, the importance of the role of importers and distributors was mentioned multiple times. From some of the interviews, it emerged that entry into the United States market can be a rather complex process to realize independently. Therefore, according to Ursini, collaboration with distributors was indicated as the most widespread way to enter the United States market, as it presupposes high costs for the establishment of direct relationships with consumers. The activities of a distributor include the sale and promotion of goods and their distribution across a very wide territory. Consequently, an importer or a distributor becomes one of the main gatekeepers for market entry. The interview with Pro Pizza showed that the exposure may also depend on the contractual structure of the transaction. Falcone explained that, in Pro Pizza's case, the U.S. supply was organized for door-to-door delivery, meaning the product arrived already cleared through customs, and the tariff was therefore relevant to the company. By contrast, drawing on the experience he has gained over the years, he said that, in another agri-food case based on ex-works delivery terms, the tariff did not directly affect the producer. This aspect is also evident in the analysis of the case studies.

It was observed that the activity of Citra Vini in the United States is carried out through importers with national coverage. As soon as Citra Vini lost its own importer, it automatically ceased to have a market presence. They said:

“Noi per anni eravamo forti nelle esportazioni USA. Però da circa sette, otto anni non esportiamo più perché abbiamo perso l'importatore che avevamo e non siamo ancora riusciti a ritrovarne un altro.

For years, we were strong in exports to the United States. However, for approximately seven or eight years, we have no longer exported there because we lost the importer we had and have not yet managed to find another one.”
(Citra Vini)

On the other hand, the stable position in the United States market of Cantina Valle Tritana can be attributed to its stable collaboration with an importer who has been providing services for many years already. Nova Ripa also operates through importers in Michigan and Florida.

The fourth theme that appeared is that of diversification to comply with management risks. Some firms describe diversification as necessary, whether deliberate or a consequence. In the interview with Ursini, the necessity was noted; in cases of strong dependence, events like these tariff shocks can destabilize the company. Spinelli Vini provided the example of a more structured and diversified exporter active in various regions, including Asia (Japan, Korea, China), Central Europe, and North America. This wide portfolio of markets contributed to explaining why the company considered the issue of United States tariffs manageable and not a shock that required radical changes. Nova Ripa also followed a diversification strategy. The company was not dependent on the United States market and already had other markets open, such as Canada and Albania. It was suggested by the interviewee that, at the current moment, other markets, both business-to-business and European markets, could represent better options as they involve less uncertainty and fewer obstacles. As mentioned previously, the same thought was also expressed in the interview with Di Carlo: "If it becomes more hostile or difficult to enter the United States market, then one should seek other markets. Information regarding other markets and foreign importers is much easier to find compared to before. Nonetheless, diversification proved more difficult for some firms compared to others. Although Cantina Valle Tritana had also explored alternative markets like Brazil, Asia, and India, the interviewee emphasized that finding an alternative to the United States market was not an easy task. The American market had played a significant role in the growth of the company. Therefore, its dimensions, marketability, and the consolidated link with the importer made it rather difficult to replace. Consequently, it becomes evident that diversification, besides being a strategic decision, also depends on the type of product, the already established relations, consumer demand, and the level of market maturity. The final theme is represented by the market reorientation without abandoning the American market; in fact, none of the interviewed companies abandoned or repudiated it; on the contrary, it is considered strong and an opportunity. William di Carlo was willing to accept orders from the United States should they have arrived. Citra Vini is seeking a new United States importer. Nova Ripa did not want to abandon the market but chose not to invest massively in a new brand under current conditions. Spinelli Vini continued to consider the United States a relevant market within its broader export portfolio. Cantina Valle Tritana continued to invest despite margin compression, since the market remained strategically essential. Overall, this aggregate dimension shows that firms' responses depend strongly on their degree of exposure to the United States market and on

the structure of their commercial relations. In fact, highly exposed firms had less freedom to disengage and were more inclined to absorb costs or continue investing despite the pressures. At the same time, those less exposed and more diversified could adopt a more selective approach, reducing commitment without exiting the market. The interviews, therefore, suggest that diversification and the relations with importers are central to understanding the responses at the firm level: the United States market remains attractive for all the firms considered, but its role varies considerably.

5.4 Regulatory and operational frictions

First-order concepts	Second-order themes	Aggregate dimension
FDA requirements; Food Safety Plan; PCQI; unclear information; costly consultants	Regulatory compliance as an additional export barrier	Regulatory and operational frictions in export markets
Goods blocked at customs; additional inspections; lack of clear interlocutors	Operational uncertainty in market access	
Internal staff managing documentation; larger firms are less affected by procedures.	Organizational capacity to absorb compliance complexity	
Product adaptation, labels, logistics, container consolidation, UK excise example	Practical adjustment to foreign market requirements	

Table 21 – Regulatory and Operational Frictions

Non-tariff barriers are not the central theme of the thesis, but they often emerged during the interviews as an extra layer of complexity in the export activity. They are important because they influence the perception of the American market on the part of the firms and add to the efforts that the firms must make to overcome them. Very often, these complement tariffs and uncertainty, rather than replacing them.

Compelling evidence of these frictions is given by the interview with Di Carlo, who describes numerous requests from the FDA (Food and Drug Administration). According to

him, these are worse than tariffs, as greater controls lead to blocks of the goods, delays, and complicated communication with the authorities. They explain:

“Assolutamente, secondo me pesa di più la burocrazia, la politica protezionistica che mette dei vincoli sempre più alti. [...] Il dazio c'è, domani si mettono d'accordo, non c'è, lo tolgono e in un attimo hai risolto il problema. Questo sistema messo in piedi di barriere all'importazione, quello rimane e non lo toglie, quindi è molto più pesante.

Absolutely, in my view, bureaucracy and the protectionist policy that introduces increasingly demanding constraints weigh more. [...] A tariff may be there today, but if they reach an agreement tomorrow, it can be removed and the problem is immediately resolved. This system of import barriers, instead, remains and is not removed; therefore, it is much more burdensome.” (William Di Carlo)

Besides the existence of these rules, emphasis is placed on the clarity of communication. The interview with Ursini adds to this, referring to the Food Safety Plan (an equivalent of our HACCP). One must substantially adapt the often-existing documentation to the American standards. The obligation to have an internal quality manager (PCQI). The interviewee described the procedure as technically complex, costly, and difficult to manage for small firms, especially when it is necessary to resort to external consultants.

Still, in the interview with Ursini, it is noted how operational frictions also manifested themselves in more concrete forms. There was a discussion of the possibility of grouping orders into full containers to reduce the incidence of transport costs, especially in the case of an increase in shipping expenses. Nova Ripa emphasized the importance of forecasts and of the back labels specific to the United States market, demonstrating that even apparently minor requirements can influence production planning. Citra Vini provided a non-United States example relative to the United Kingdom after Brexit: the company adapted the alcohol content of the wine to reduce the impact of excise duties, demonstrating that even foreign fiscal and regulatory constraints can lead to adjustments at the product level.

At the same time, Spinelli Vini went a bit against the current compared to the other interviews, showing how they can be overcome if one has a good organizational capacity. In fact, for them, presenting documentation and compliance does not result in an obstacle, because they have a team dedicated only to this. The structural difference in this case makes the difference, being of larger dimensions. This contrasts with smaller firms, for which the

same requirements can entail a more burdensome fixed cost. Therefore, regulatory obstacles do not affect all firms in the same way: their incidence varies with firm size, experience, internal capacities, and the availability of specialized personnel.

Regarding this specific aggregate, its importance should be considered more as complementary than fundamental. This derives from the fact that, according to the interviewees, in evaluating the export potential of the United States market, exporters do not limit themselves to considering tariffs but also take into account other issues related to bureaucratic practices, documentation, controls, labeling, and logistics. All these difficulties make the United States market complex and can influence the decision of exporters regarding further actions relative to investments or priorities.

5.5 Summary of qualitative findings

Based on the interviews, the companies do not respond in a uniform way to tariff shocks or uncertainty. The differences in strategic responses stem from factors such as dependence on the American market, size, and organizational capacity.

In the first place, we find the effects on prices, margins, or bargaining relations. Some companies saw compressed margins, with little room to offer discounts. Other cases show that tariffs are often shared among importers or distributors, passed on to consumers, or used as a means of negotiation. The example of Cantina Valle Tritana is clear: being highly exposed, they decided not to risk it and cut profitability to maintain a strong position in the American market. On the contrary, the more diversified or better-positioned companies adopted a more selective approach, especially in cases where the brand value or the product quality limited the availability to grant price discounts.

A further finding is that uncertainty proved more disruptive than the tariff level itself. Tariffs can be incorporated into prices or discussed, but uncertainty shows a more complex picture. In fact, as a result, trade fairs were postponed, investments were delayed, promotional expenses were reduced, and shorter planning horizons were adopted, among other measures. However, a market exit from the American market was never found, but rather a moderation, such as reducing commitment and resources in that market.

Furthermore, the interviews indicate significant differences in the importance of the United States market. Some firms were strongly dependent on the American market, while for others it represented only an auxiliary market. This determined the number of possible responses to the challenge. The dependence on the United States market limited the possibilities of interrupting relations or of withdrawing, forcing firms to accept lower margins or to continue to invest, independently of the uncertainties. Firms with lower exposure or dependence on the United States market could more easily shift their attention to other countries. Furthermore, the case of Citra Vini demonstrated that the loss of an importer can involve a complete exit from the United States market, regardless of the suitability of the products and the market.

Finally, the regulatory and procedural obstacles emerged as an additional but relevant variable. The FDA regulations, compliance with FSMA, PCQI practices, labeling and documentation, logistics, and other aspects related to the United States market were not central to this work. However, they were nonetheless part of the perceptions of foreign firms regarding the United States market. Such elements influenced the work with the United States market in general and proved to be particularly burdensome for small producers, while the more structured exporters seemed more adapted to such requirements.

In summary, the qualitative evidence shows that tariffs and uncertainty affect companies not in isolation but as a set of commercial, organizational, and market-access constraints. The main result can be summarized as heterogeneity: there is no single way to react to tariffs; responses always depend on the firm and its characteristics. This constitutes the basis for the analysis chapter that follows, in which such qualitative results are interpreted in light of the quantitative results and of the theoretical framework of the thesis.

6 Discussion

In this chapter, the research findings, both quantitative and qualitative, are discussed and further integrated with the theoretical framework.

6.1 Synthesis of quantitative and qualitative findings

The quantitative findings suggest that in recent periods tariffs and TPU have not led to a collapse of trade between the two countries, but there have been some changes. The exposed sectors in both analysis periods performed less when compared with the pharmaceutical sector. Considering instead the comparisons with the aggregates, the attenuation is more moderate and sector-specific. It is noted, however, that the divergence lies more in the quantities than in the values, which sometimes increases even if not uniformly. This indicates that the adjustment process was not determined simply by a drop in prices or by a contraction of the nominal value of exports but was more closely linked to the relative intensity of the physical presence of firms and sectors on the U.S. market.

The results from the analysis of the qualitative data explain this. Firms do not interpret their strategy as an exit from the U.S. market. Rather, their behavior can be characterized as strategic moderation. In this regard, firms maintain their presence in the market when there is an economic necessity to do so; however, they are more cautious regarding price determination, investments, planning, marketing spending, and market development. At times, the tariffs they pay can be discussed and shared with importers and distributors. Uncertainty forces firms to postpone the decision-making process, to minimize their involvement in irreversible decisions, and to give priority to markets where it is easier to predict future planning. In particular, trade policy uncertainty is expected to influence the behavior of firms both before and after having sustained the cost of tariffs. This is due to the roles of sunk costs, market-specific investments, and commercial links.

Consequently, if interpreted together, one obtains that the results do not consist of a flight from the American market, but a reduction in intensity and commitments to it is noted. The two strands, therefore, converge toward the same broader interpretation: the main response

does not consist in a sudden exit, but rather in a more careful and selective management of exposure to the United States market.

6.1.1 Relative export weakening without generalized collapse

As noted, no signs of a sudden, generalized collapse in exports emerge. Some sectors maintained positive export values at times, and aggregate data remained relevant in the American market, as shown by the descriptive analysis. It is also noted that value and quantity do not always move jointly. Between 2024 and 2025, exports to the United States decreased in quantity but increased in value for both entities of analysis. This price resistance can be due to higher unit prices, price effects, or changes in product composition.

This nuance is fundamental to a correct understanding of the results, so that they are not interpreted in an excessive, purely mechanical way. Although the recent trend in the value of European exports to the United States may seem rather stable or even favorable, the data on volumes paint a much more pessimistic picture. On the basis of the aggregate estimates, a drop in terms of quantity of 9.7% and a growth in terms of value of 3.6% for the exports of the EU27 toward the United States is observed, and a decrease of 10.3% and a growth of 7.2% for the Italian exports toward the United States in the period 2024-2025. Therefore, the current dynamics cannot be associated with a general contraction of exports, but rather with the phenomenon of the nominal sustainability of exports in the context of a drop in the physical intensity of exports.

In fact, this trend is confirmed by the estimated econometric model. The baseline DiD models demonstrate that sectors exposed to tariffs generally showed weaker performance than the pharmaceutical industry in terms of export orientation toward the United States in both periods considered. In particular, the first interaction coefficient was negative and statistically significant, which implies a reduction of the share of exports toward the United States of the sectors under examination of about 25-26%. In the second period, comparing 2024 with 2025, the estimated relative reduction is smaller but still statistically significant, at about 15%.

This interpretation is, however, specified by the robustness check conducted using the aggregate export flows as an alternative benchmark. When the exposed sectors are compared

with total exports rather than with the pharmaceutical sector alone, the divergence appears much more moderate. In the first period, an underperformance compared to the aggregate trend does not emerge. In the 2024–2025 comparison, the coefficient becomes negative and significant at 5% level, ($\beta = -0.062$; $p = 0.039$). Though, it is equal to about -6.1%, a small magnitude. At the sectoral level, this recent weakening is concentrated especially in **iron and steel** ($\beta = -0.134$, about -12.5%) and, to a lesser extent, in **beverages** ($\beta = -0.090$, about -8.6%), while **aluminum** results are substantially aligned with the total. The comparison with the pharmaceutical sector, which is a strong benchmark, highlights a real divergence, but does not highlight a generalized collapse.

At the same time, these estimates must not be interpreted as proof of a rigorous causal effect of the tariffs. The presence of only one year of pre-period in each specification limits the possibility of fully validating the hypothesis of parallel trends. Also, other shocks, including logistics disruptions and the COVID-19 interruption in the first-time window, could have influenced the export models. For this reason, the results are better interpreted as proof of a relative sectoral divergence rather than as proof that tariffs alone mechanically caused the observed changes.

The decomposition of the DiD results provides further clarification. The relative weakening of the sectors considered is mainly attributable to the quantitative component, not to a generalized deterioration in relative unit values. In the first period, the coefficient on relative quantities is negative and statistically significant, whereas the component relative to prices is negative but not statistically significant. In the second period, the quantitative component remains clearly negative, while the component relative to the price becomes positive. This means that, especially in the 2024–2025 comparison, the weaker relative orientation of the exposed sectors is not attributable to a collapse in unit values. Rather, it reflects a reduction in the relative physical presence of exports, partially offset by more favorable unit value dynamics.

This point is particularly important for the analysis, as it suggests an alternative way of interpreting the quantitative results. Although this does not mean that sectors exposed to tariffs have entirely lost their capacity to create value in the United States, the fundamental issue seems to be that, compared to the pharmaceutical industry, they appear less able to maintain and expand their respective levels of activity in the United States. This is consistent

with the argument that tariff-related shocks and associated TPU can erode firms' commitment to a given market without inducing outright exit.

6.1.2 Firm-level moderation rather than full market exit

Rather than withdrawal, the qualitative evidence add a firm-level mechanism to the aggregate pattern, which is represented by cost absorption or selective pricing. Yes, there is evidence of a deterioration in exports to the United States, especially when compared with the pharmaceutical sector, but, as highlighted by the interviews, the firms did not react by exiting the market. Instead, it seems that the strength of the economy and the American market keeps firms interested. However, they preferred to reduce commitment, based on exposure, bargaining power, product, and ability to manage unforeseen events. Cautious moderation is therefore highlighted at the firm level, but not at the market exit level.

The moderating effect begins with how firms manage changes in prices and margins. From the interviews, it emerges that an increase in tariffs does not necessarily imply a proportional increase in prices nor an immediate reduction in exports. Some firms may not have sufficient room to reduce prices due to margin compression. For other firms, tariff costs can be passed on to importers and distributors, or even further downstream in the supply chain. An example is represented by Peperoncino S.r.l., which operates under the name of Cantina Valle Tritana. Since the share of the U.S. market is high for the company, it had no choice but to accept lower margins to maintain its presence in the market. On the other hand, firms like Nova Ripa and Spinelli Vini, with a lower exposure to the American market, adopted a more strategic approach. They did not offer discounts unless there was volume consideration or a commercial justification at the base.

Another form of moderation concerns planning and investment decisions. It is established that firms fear uncertainty more than the tariff, as the former affects future plans. The tariff is more manageable; it can be divided, negotiated, and incorporated into prices. The results are shorter business plans, reduced superfluous expenses and marketing, or forecasting difficulties. An example is the missed participation of Ursini at the Fancy Food Show in New York. Again, an exit is not highlighted, but a reduction of efforts and intensity in the American market.

The importance of the role of exposure must also be highlighted. Some firms are much more dependent on the United States market compared to others, and this difference in dependency influences the options available for action. For highly exposed firms, it is very difficult to limit operations in the United States. Consequently, such firms are more inclined to absorb the shock, if necessary, or to try to reach an agreement with importers, while maintaining continuity. Firms with lower exposure or greater diversification can instead shift their attention to other markets, spend fewer resources promoting their products in the United States, or wait for the situation to become less volatile before deciding to increase operational volume. This underscores the heterogeneity of firms, which differ in how they respond to shocks.

It is also important to evaluate the dependency on importers, as they are an integral part of the export process. The interview with Citra Vini shows us that if one depends on a single importer, it is risky; if it closes, one exits the market suddenly. On the other hand, the Valle Tritana case highlights a long history of collaboration that enabled it to grow and establish its presence in the American territory. Synthesizing, there are other variables that determine the presence in a foreign market besides tariffs.

Overall, the qualitative results refine the interpretation of the quantitative results, showing that firms typically do not respond to tariff-related shocks with immediate market exit or simple price increases. Rather, they tend to adjust at the margin by protecting profitability, limiting concessions, delaying non-essential investments, relying on importers, and diversifying selectively. This suggests a cautious approach of a "wait-and-react" type: the United States market often remains attractive and, in some cases, strategically essential, but firms become more selective in the level of resources they are willing to commit to it. In this sense, the relative quantitative drop can be interpreted as the aggregate reflection of a strategic moderation at the firm level. This is consistent with the logic of real options, according to which uncertainty increases the value of waiting when decisions involve sunk costs or partially irreversible commitments (Bernanke, 1980; Dixit & Pindyck, 1994), and with the literature on trade policy uncertainty, which shows how firms react not only to current tariffs, but also to the instability of future trade policy conditions (Handley, 2011; Handley & Limão, 2017).

6.1.3 Integrating the two strands: quantity effect as a strategic restraint

Taken together, the quantitative and qualitative results suggest that the effect of tariffs and TPU is better interpreted as a reduction in the intensity of involvement in the United States market, rather than as a uniform contraction or a complete market exit. Quantitative analysis captures this pattern through the relative weakening of sectors exposed to tariffs, especially in terms of quantity, while qualitative evidence explains how such weakening can emerge at the firm level through more cautious investment, selective pricing, reliance on importers, and gradual diversification. The two strands, therefore, converge on the same interpretation: the quantity decline is better read as a proxy for reduced strategic commitment than as a signal of market contraction. This integrated reading constitutes the basis for the next section, which interprets the results through the theoretical framework developed in Chapter 2.

6.2 Interpretation through the theoretical framework

6.2.1 Relative weakening and strategic moderation under uncertainty

A result that seems central, emerging from the quantitative analysis, is that the exposed sectors performed worse than the control sector, the pharmaceutical sector. The results show this in both analysis periods, 2016 vs 2017-2020 and 2024 vs 2025. In these periods, the treated sectors show a relative change, negative and statistically relevant if one compares them with pharma, but in the second period, it has a smaller magnitude. It demonstrates again that there was no collapse of exports toward the United States, but that in those sectors, the treated ones, they lose ground compared to the more resilient ones.

The importance of the finding lies in refuting a simple interpretation of the effects of tariffs. If tariffs are interpreted as cost shocks, a pronounced, general contraction in exports is expected, favoring American goods. Instead, a decrease is certainly noted, but not a sudden collapse. The exposed sectors are weaker in both periods; however, there is no expected collapse in the second period. This suggests that the mechanism in question is not only the direct tariff burden but also the way firms adjust their commitment when the United States market becomes less predictable.

These qualitative results help to understand the reason. The companies interviewed usually do not interpret their behavior as a complete withdrawal from the American market. Instead, they speak of adapting to the situation by postponing or downsizing promotional campaigns, modifying plans more often, refraining from making unnecessary investments, and becoming more selective regarding the volume of commercial activity destined for the United States market. It confirms that tariffs and TPU push firms toward to a strategic moderation, rather than a immediate market exit. This is exactly the link between the two strands of evidence used in the document. The quantitative results indicate a weakening of the orientation to the United States market by exporters, while the qualitative results suggest that such weakening can happen without a market exit.

This can be explained using the real options approach. According to Bernanke (1980), the increase in uncertainty can cause delays in investments when waiting allows firms to obtain further information about the context. Dixit and Pindyck (1994) demonstrate that this effect becomes even more significant when decisions involve sunk costs or irreversible investments. These ideas apply perfectly to export strategies. In fact, exporting to the United States market can involve participation in international trade fairs, expenses for marketing activities, efforts aimed at compliance with regulations, the construction of relationships with importers, and other types of commercial activities.

The literature on TPU makes this mechanism more specific. Handley (2011) interprets TPU as a barrier to trade because it alters incentives to enter, expand, or remain in markets with sunk costs. Handley and Limão (2017) show that companies do not look only at today's tariffs but also at possible future changes. This is consistent with explaining why the persistence of the gap analyzed in this thesis should not be interpreted exclusively as a direct effect of tariffs. This is furthermore coherent with the reluctance of firms to increase their exposure in the United States market as long as the future conditions of market access remain unstable; on the contrary, it explains the reason for the moderation.

The contribution of this finding consists, therefore, in showing how TPU and tariff pressure can act through a strategic moderation rather than through an immediate withdrawal. The firms' object of this study does not appear simply passive or inactive: they continue to negotiate, to preserve relationships, and to serve the United States market where this remains commercially relevant. However, they become more cautious in expanding their commitment. This nuance is important because it connects the quantitative evidence of a

relative weakening with the qualitative evidence of a selective adaptation. In this case, tariffs and uncertainty do not eliminate the United States market from the strategies of firms, but reduce the willingness to invest further in it.

6.2.2 Quantity-driven adjustment and the value of waiting

A second important result is the way in which the weakening of the treated sectors appears, their decomposition. From the analysis, it is evident that the negative gap between the treated sectors and the pharmaceutical sector is mainly due to quantities and is visible in both periods. The quantities decrease, but the unit values seem to remain positive, especially for the second period. This result is relevant because it reflects more faithfully the physical and commercial intensity of the presence of the firms in the United States market. They indicate whether firms are able or willing to maintain shipments, expand commercial relationships, sustain demand, and invest in market development.

Looking beyond the decomposition alone, it is evident that the adjustment process also occurs through an initial reduction in commitment rather than a rapid exit. In fact, many firms remained present, reducing commitment, intensity, and resources, because they consider the US market crucial for the activities. This translates into reduced marketing spending, deferred investments in market development, and more conservative inventory management.

The qualitative results corroborate this interpretation of the data. Some participants reported having adopted behaviors that correspond to lower levels of commercial commitment, such as the postponement of participation in trade fairs, the reduction of marketing initiatives, the shortening of planning periods, and the difficulty in obtaining reliable forecasts from the partner United States companies. The case of the postponement of participation in the Fancy Food fair is particularly significant, as it demonstrates the impact of uncertainty on market development before the definition of concrete exit plans. The frequent changes in corporate plans and the problems in receiving forecasts from importers illustrate how uncertainty can lead companies to reduce their commercial activity in the United States.

The theory of real options provides an explanation of why this strategy makes sense. According to Bernanke (1980), uncertainty can effectively encourage waiting, since

companies will want to postpone decisions until they receive further information. Dixit & Pindyck (1994) demonstrate that this logic is even stronger in cases where decisions involve sunk costs and partial irreversibility. In the case under examination, the development of the market in the United States often involves costs difficult to recover, such as participation in commercial trade fairs, adaptation to regulations, marketing campaigns, construction of relationships with importers, and long-term planning. When future trade policy is unstable, firms can rationally reduce or postpone these commitments rather than expanding aggressively. This is also consistent with Handley (2011) and Handley and Limão (2017), who show that firms respond not only to current tariff levels but also to the perceived risk of future policy changes. In this study, the theories are explained mainly by the quantities, limiting expansion, and future plans.

The contribution of this result resides in the mechanism through which the quantitative and qualitative data are connected. The reduction in quantitative terms does not necessarily imply that the demand or the trade itself weakened. In some cases, firms are maintaining their access to the United States combined with cautious investments and less promotional activities, because of TPU. This provides an insight into the literature on TPU, illustrating that waiting does not simply concern the entry or exit from the market, but can also involve a reduction of export efforts by existing firms.

6.2.3 Preserved unit values, margins and bargaining power

Although the previous section interprets the quantitative channel as a sign of a lower commitment to the market, another important result concerns what does not emerge from the data: the weaker performance of the sectors exposed to tariffs is not accompanied by a generalized deterioration of the relative unit values. This is particularly evident in the decomposition relative to the 2024–2025 period, in which the component relative to the price is positive. This is relevant because a simple interpretation of tariffs as cost shocks could lead to expecting a more evident deterioration of export values or of unit values. Instead, the data suggest that part of the adjustment happened through the defense of value rather than through a generalized reduction of prices. In other words, the exposed sectors lost ground in terms of physical intensity of exports, but this did not automatically translate into a weaker unit value.

This pattern can be interpreted in light of the literature on tariff pass-through, on markups, and on heterogeneous pricing behaviors. Amiti, Redding, and Weinstein (2019) show that the incidence of tariffs depends on how costs are transmitted among importers, firms, and consumers, while Flaaen, Hortaçsu, and Tintelnot (2019) highlight that downstream effects also depend on the capacity of firms to reorganize their production activities and supply chains. Also, De Loecker et al. (2016) are useful for interpreting this result, since they show that variations in trade costs can influence marginal costs and margins in different ways, implying that firms do not necessarily transfer cost shocks one-to-one into final prices. In this thesis, the absence of a systematically negative effect on unit values is consistent with this interpretation: firms can react to tariff pressure not only by modifying prices, but also by adjusting margins, quantities, or commercial strategies.

The qualitative results further clarify this mechanism. The firms interviewed did not describe tariffs simply as an external cost automatically transferred to customers. Rather, tariffs often became part of the bargaining process with importers and distributors. In some cases, firms absorbed part of the tariff burden to preserve their position in the United States market; in others, they resisted discounts not linked to larger volumes or to broader commercial benefits, these can be defined as tactical responses. This is particularly relevant for firms with stronger brand positioning, which emphasize the necessity to defend the value of the product rather than compete exclusively through price reductions. Ludema and Yu (2016) help to interpret this result, showing that tariff pass-through varies among firms and products as a function of productivity, qualitative differentiation, and markup behavior. The underlying mechanism can be made more explicit. Firms with differentiated products or with consolidated brand positioning have room for maneuvers that firms with more standardized products do not have and can absorb part of the tariff burden. Therefore, as an outcome, firms compress their own margins without having to reduce list prices. This avoids signaling deterioration in product value to the market. This behavior is rational when the reputational cost of a price reduction exceeds the cost of a temporary margin compression, particularly for products where price is a signal of perceived quality. It is exactly this logic that explains why the coefficient relative to unit prices remains positive in the second period even while relative quantities decrease: the firms that remain active on the United States market are those that chose or managed to defend the unit value, eventually at the expense of volumes.

The contribution to this result nuances a simplistic interpretation of the effects of tariffs based on a collapse of prices. In this case, the main adjustment does not manifest itself as a generalized decrease in unit values but as a combination of reduction of quantities, selective absorption of tariff burdens, and bargaining on who sustains the cost of tariffs. This implies that tariffs can weaken the involvement of firms in the United States market even when nominal or unit values remain relatively resilient. The qualitative evidence adds an important mechanism at the firm level: tariffs are not only shocks to trade costs but also bargaining shocks within the export value chain. Their final impact depends on the relative power of exporters, importers, distributors, and customers, as well as on product positioning and on the capacity of the firm to protect margins.

6.2.4 Responses to tariffs and TPU: from tactical adjustment to strategic redesign

A further implication of the findings concerns the nature of firms' responses to tariff-related shocks and TPU. The literature review already identified several possible reaction margins, among which we identify price adjustments, tariff absorption, diversification, and market reallocation. However, the responses must not be interpreted in the same manner but based on the degree of immediacy and depth (Sheffi, 2025). The hierarchical range, starting with the most immediate, includes tactical and operational responses, as well as strategic redesign. This distinction is important because Bernard et al. (2018) show that firms differ in the adjustment margins available to them.

In fact, companies respond based on different factors and on the margin of adjustment. Simultaneously, the literature on uncertainty tells us that companies could slow down and postpone investments, modify strategic decisions, or decrease intensity if they realize that conditions in the future will be unstable and there is a presence of sunk costs (Dixit & Pindyck, 1994). In a similar way, companies could reduce their commitment to export or to international expansion in the long term in conditions of uncertainty (Handley & Limão, 2017).

The tactical level of the hierarchy includes immediate, and rapid decisions, which can also be easily reversed. Among these, we find negotiations to share the tariff burden with importers or price reductions, refusing the concession of discounts unless for higher sales volumes. They are indeed easily reversible, because companies aim to maintain the

commercial relationship with the United States and do not want to change their international strategy. This perspective is fundamentally consistent with the pass-through theory, since it tells us that the tariff does not necessarily reach consumers who shoulder it entirely, but upstream there are operations that can prevent the impact on the final consumer (Amiti et al., 2019; Ludema & Yu, 2016). The compression of margins is the natural consequence of these response operations, rather than being the response in itself.

The second level of the hierarchy is the operational one, where a moderation in the planning and development of markets was noted from the interviews. Among these, we find precisely companies that do not participate in trade fairs or postpone them, a reduction of promotional expenses, some modifications to packaging or labeling, or the more frequent revision of business plans. Although consistent, they respond in a partial way to the details listed by Sheffi (2025). He, in fact, emphasizes more the monitoring, decisions of adaptation of the burden, but also modifications to products or reconfiguration of the supply chain. From the interviews, no major modifications to the supply chain were noted, perhaps due also to the dimensions of the sample of firms, which, besides being small, concerned SME firms of the food and beverage sector. The interviewed firms tended toward cautious containment rather than structural reconfiguration.

If we observe the last category of the hierarchy, that is, strategic redesign, it seems to be even less present in the qualitative evidence. What is deduced is mostly a reduction of commitment, trying to exploit the diversification that one had, or gives a cue to start new commercial relations. This, however, results in very consistent findings with some parts of the literature that consider the companies with more countries in the portfolio, and can reallocate easily, to be more advantaged, and that are more diversified or that are more structured. Smaller companies and those with less diversification struggle more instead (Meng & Wang, 2023; Bottoni et al., 2025). Nonetheless, the qualitative evidence does not provide us with a picture of market exit, unless due to other factors. More clearly, it is deduced that the majority of responses were operational and tactical, aimed at trying to maintain the presence in such an important market. The strategic reorientation and redesign are visible only partially, and only in the case that uncertainty persists, and companies are able to find relevant and credible alternatives.

The distinction is a further help in trying to reconcile the theoretical framework with the qualitative evidence. In general terms, the responses fall into these categories, even if some

result more gradual and selective. Moreover, the moderating role of heterogeneity is very visible; in fact, the differences depend on dependence on importers, diversification, exposure to the American market, and the entrepreneur's capacity. The conclusion of this part is not simply to say that companies “respond strategically”. But more than this, the degrees of response are deduced, even if for the most part they are tactical and operational, but also in some cases strategic redesign. Overall, the sense of the thesis must not be interpreted as companies exiting the market in response to tariffs or to TPU. The idea must be that these shocks produce effects that modify the behavior of companies in multiple phases, from smaller adaptations to changes in the organization.

6.2.5 Firm heterogeneity as a moderating factor

Another finding of the thesis is that the effects of tariffs are not uniform but change from sector to sector and from company to company. The most resilient, less exposed to tariffs, and driven by nature are the pharmaceutical and control sectors. Metals are instead the most fragile (iron and steel), machinery drops in quantity, food is robust, but beverages are a sector of mixed patterns. If one analyzes the trends of the exporting entities, it is deduced that Italy and the EU27 have a similar trend, and the gap between treated and pharmaceuticals is similar between the two countries, especially for the second period. The evidence indicates that this trend is similar in Italy and the EU27, and that Italy did not experience particular shocks.

The finding has relevance as it confirms that tariffs and TPU cannot be interpreted through the idea of an average exporter. If tariffs were uniform, the effects would be similar, but in reality, tariffs are different, and so are the effects. The results show that the sectoral structure counts, meaning that sectors do not perform in the same way, but in a different way, with the example of pharma, which performs stronger than the others. This analysis allowed for adding a further layer to the analysis, a better understanding of the structure of sectors and companies.

The literature on heterogeneous firms can be useful in this regard. According to Melitz (2003), there exists heterogeneity in the productivity of firms, and only some of them have the capacity to sustain the fixed costs of exports. Similarly, Bernard et al. (2018) state that firms react to shocks on multiple fronts, including market diversification, organizational

capacity, and product differentiation. This is why tariffs do not elicit a uniform reaction. The firm that has market diversification, organizational capacity, and product differentiation will react differently from firms that depend on a specific market or a particular importer. In the same way, Redding (2010) and Costinot, Rodríguez-Clare, and Werning (2020) favor the selection and incidence approach over that of the representative firm.

This interpretation is further supported by the empirical literature on European exporters, according to Giordano & Lopez-Garcia (2019), firms that export have larger dimensions and productivity. The literature of the ECB, in its turn, shows that export activity requires that firms are able to sustain trade costs, including both barriers and financial costs (Giordano & Lopez-Garcia, 2019). The relevance of this literature for the present study resides in the fact that the interviews conducted in Italy demonstrate that vulnerability does not concern only one dimension. It is also correlated to the degree of exposure toward the United States, to the dependency on importers, to margins, and to the capacity to shift attention toward other markets. In this way, the similarity between Italy and the countries of the EU27 in terms of the results of the quantitative analysis makes the use of Italy as an example more justified. This result also has a broader methodological relevance. If the adjustment pattern were exclusively idiosyncratic to Italy, that is explainable only by the national productive structure or by specific institutional factors, the qualitative conclusions drawn from the interviews with Italian companies could not be extended to the wider European context. The fact that Italy and EU27 show a similar divergence compared to the pharmaceutical sector in both periods suggests instead that the mechanisms identified at the qualitative level, strategic moderation, margin compression, and reduction of promotional commitments, are consistent and help interpret the general trends of European exporters exposed to U.S. tariff shocks. However, this does not imply a statistical generalization as a whole.

It is also interesting to note that heterogeneity is not limited to the degree of exposure but also depends on the capacity of firms to react to the same external shock. Besides the elements mentioned above, firms highlighted FDA requirements, documentation issues, labeling difficulties, logistical concerns, and dependence on importers as further obstacles to entry or expansion in the United States market. However, such frictions do not affect all firms equally. Highly exposed firms have limited options to withdraw from the United States market, as this would mean giving up their strategic access point and, in some cases, existing partnerships with importers. Such firms will be more inclined to absorb costs, to negotiate

with importers, or to protect final consumers from unreasonable price increases. At the same time, firms with low exposure to the United States market and diversified exports will be more flexible in responding to such shocks, for example, by reducing promotional efforts in the United States, focusing on other markets, or postponing expansion until favorable political conditions arise. Other firms, particularly those with a strong brand, will prefer to resist price concessions in order to protect the value of their products, even at the cost of a slower growth of sales. They are not the main focus of quantitative models, but they help explain why market commitment can become more cautious and why similar external shocks can generate different types and depths of firm responses.

This finding is very important because it connects heterogeneity at both the company and sector levels. The quantitative analysis tells us how sectors differ toward the United States; the qualitative analysis, instead, tells us how different the responses are within the sectors. The way firms respond to TPU varies across firms. According to Oliver (1991), firms can respond to external pressures by adopting adaptation, compromise, avoidance, or selective resistance, depending on their degree of dependence, their goals, and the resources at their disposal. In this thesis, heterogeneity is treated as a moderating factor: it is the factor that determines different effects among firms. Therefore, it is a mechanism that tells how tariffs and TPU translate into firm-level outcomes.

6.2.6 Institutional distance and liability of foreignness in the U.S. market

The findings can also be interpreted through the lens of the IBV. This emphasizes that corporate strategies are not only affected by industry conditions and internal capacities but also by the surrounding institutional environment, both formal and informal. It is therefore the institutions that define laws and rules that the firm must respect, and therefore they modify the choices that managers can implement and their perception (Peng et al., 2008, 2009). In the study of the present thesis this means that tariffs cannot be considered only as an increase in transaction costs. They represent furthermore a change in the formal institutional context that disciplines market access, since they modify the normative conditions based on which European exporters plan, set prices, negotiate and employ resources.

The analysis conducted in this context is particularly applicable when tariffs combine with the aspect of trade policy uncertainty. The problem encountered by firms does not concern only the tariff rate, but is also linked to the instability of the institutional context that characterized the introduction of such tariff, as well as to its potential development and to its duration. In line with the Institutional-Based View, the strategic actions undertaken by firms are linked to their adaptation to the institutional context in the case in which the rules of the game change or are not clear (Peng et al., 2008). Therefore, the caution emerged during the interviews can be considered the result of an institutional context that had become less stable.

The relevance of the institutional environment extends also beyond the tariffs themselves. The qualitative data highlight that firms had to face normative and operative requirements relative to documentation, to labeling, to customs procedures, and many others. They are very important elements because it is a clear example of how institutions influence economic activities through rules and administrative procedures. To have success firms must study them, understand them and implement them (Peng et al., 2009). Aguilera-Caracuel et al. (2013), in the context of the environmental practices of multinational firms, show that a greater formal institutional distance can induce firms to adapt their own practices to the legal requirements of the host country. In this case, the United States market continued to be interesting, but to access it firms had to face several institutional requirements that could increase the complexity and the costs linked to maintain their position.

Institutional distance explains why such requirements can result particularly important for foreign exporters. The concept of institutional distance represents the gap between the institutional contexts of the exporting country and of the importing one. However, according to Kostova et al. (2020), the term must be linked to a specific mechanism and cannot explain all the problems associated with operating at a transnational level. In the present thesis, this means that the relevant aspects will not be the general cultural differences between Europe and the United States but will concern the differences in regulations and in compliance procedures, in market access and in the organization of commercial relations. This approach is in line with the original idea of Kostova (1999). According to her study, the practices developed in a determined institutional context can be more difficult to transfer and institutionalize in another context, exactly because they are rooted in the original environment.

According to this perspective, European exporters could find themselves having to adjust the routines of their country to the requirements of the United States. Documents and administrative procedures, among all, must be adapted and not simply transferred. Kostova (1999) explains that transnational transfer is influenced by the context in which it is inserted, while Kostova et al. (2020) show, through a literature review, that institutional distance can operate through different mechanisms, among which the scarce familiarity with the institutional order, the difficulties in satisfying legitimacy requests, the adaptation to different requirements and the greater internal and external complexity. In a more practical form this is encountered in the findings. In fact, companies did not simply describe the direct burden of tariffs but also mentioned requirements, coordination with intermediaries and maintaining compliance in a distant market.

The aforementioned problems are strictly linked to the so-called “liability of foreignness”. According to Zaheer (1995), LOF is defined as the greater cost sustained by foreign firms, which is not shared by national firms and is linked to the problems caused by the lack of familiarity, by the absence of local ties, by remote coordination and by the disadvantages of the context of the host country. As emerged from the interviews, exporters in Europe had to face some of the abovementioned disadvantages even if they did not operate through foreign subsidiaries. The very fact of being foreign suppliers forced them to depend on external sources of knowledge, to manage cross-border documentation and to resort to the help of the local population to obtain information and access trade routes.

An important role in this regard is covered by the importer. In fact, from the findings it emerges that the importer or distributor were not simple commercial partners for sales in the destination country. Sometimes they were used as local knowledge, to interpret the rules and therefore market access. They were therefore a reason why unfamiliarity is reduced and therefore part of the costs, thanks to managing part of the operational process. This interpretation is consistent with Shirodkar and Konara (2017), who show that a greater experience in the host country and a stronger local rooting can attenuate the negative effects of institutional distance. Although their study concerns foreign subsidiaries, a similar logic can help to interpret the role played by importers and distributors as sources of local knowledge. On the other hand, relying on intermediaries could also be challenging, in the sense that, it might not allow the company to control how the tariff was passed through, but also to see how products were positioned or how information was communicated.

The dependency on importers has therefore had a dual impact on strategy. On one hand, it helped companies to remain present on the market despite the difficulties that could have arisen in the management of regulations and operations without such support. On the other hand, it involved a lesser control on the process and higher risks linked to the actions of local partners. Such contradictions can help to clarify the reasons why some companies managed to maintain their presence on the United States market without strengthening their commitment.

The concept of strategic moderation can therefore also be extended beyond the real option interpretation, discussed in the preceding sections. The logic of real options explains why firms can postpone irreversible commitments when uncertainty increases. This institutional perspective instead adds that the value of caution is greater when the foreign market requires adaptations to complex or changing institutional conditions. Strategic moderation reflects the value of waiting and the necessity to manage LOF. Firms maintained operational continuity but limited the rapidity or the scope of their own commitment in order to avoid an excessive exposure to a market characterized both by political instability and by discrete institutional complexity.

This perspective does not replace the other theoretical frameworks applied in the present thesis. However, it highlights how they complement each other: trade policy uncertainty and the theory of real options help to understand the reasons at the basis of delays and of the reluctance to assume commitments; the approach based on the heterogeneity of firms shows the reasons at the basis of the different capacities of the various firms to adapt and resist shocks; while the perspective based on institutions shows how external institutions to the firm influence the constraints to which the firm must respond. The conceptual framework of the LOF helps us to understand why such constraints assume greater importance for European exporters compared to national firms in the United States. Taken together, these perspectives help us to understand the central result of the thesis: firms did not leave the United States but modified their degree of commitment because of the interaction among various factors.

6.3 Comparison with previous empirical evidence

6.3.1 Findings consistent with prior empirical studies

In this thesis, several observations are formulated that align with prior empirical research on the impact of tariffs and trade policy uncertainty on firms. In the first place, the numerical results demonstrate that sectors exposed to tariffs perform worse than a more robust reference sector. This conclusion is corroborated by other studies that reveal how tariffs are far from neutral trade policy instruments and influence trade volume, prices, investment, productivity, and overall economic performance. Furceri et al. (2018) observe that tariffs involve a reduction in production and productivity levels, while Boer and Rieth (2024) reveal that unexpected variations in tariff levels determine a decrease in imports, exports, investments, and GDP. In this thesis, however, the impact does not manifest as a collapse in exports; nonetheless, it is in line with previous results regarding the impact of tariffs.

The findings are also consistent with the TPU literature. The interviews confirm that uncertainty is perceived as more disruptive than the tariff level itself, precisely because it affects forecasts, planning horizons, and the scope of promotional and investment activities. According to the literature, consistent with the findings, uncertainty increases the value of waiting and discourages investment and expansion when sunk costs are present, as shown by Bernanke (1980) and Dixit & Pindyck (1994). One also notes consistency with Handley (2011) and Handley and Limão (2017), who show that uncertainty acts as a barrier to export participation, even before the tariff change materializes.

In the third place, the results are in line with the literature on the adjustments of heterogeneous firms. On one hand, quantitative analysis suggests that different sectors react in different ways, while on the other hand, the qualitative evidence reveals that different firms have the capacity to cope with the shock, negotiate it, or deflect it. Such heterogeneity is consistent with the theory of heterogeneous firms, according to which exporting firms are heterogeneous in terms of productivity and market coverage (Melitz, 2003). Bernard et al. (2018) instead emphasize the adjustments for procurement practices and capacity to sustain the fixed costs of trade, therefore, multiple margins. Furthermore, they are consistent with empirical research, which shows that there is heterogeneity in the reactions of firms through

mechanisms of price determination, margins, exit, and reallocation rather than a common adjustment path (Ludema & Yu, 2016; Iseki et al., 2026; Meng & Wang, 2023).

To a large extent, the findings are also consistent with International Business research on institutional distance and liability of foreignness. The operational and regulatory frictions emerging from the interviews reflect additional costs related to unfamiliarity, limited local embeddedness, and the coordination of activities across borders. Zaheer (1995) identifies these mechanisms as central sources of liability of foreignness, while Gaur and Lu (2007) and Shirodkar and Konara (2017) show that institutional distance can increase learning, coordination, and relational difficulties in foreign operations. In this thesis, similar disadvantages emerge in the management of distributor relationships, access to market information, and compliance with U.S. requirements.

The findings are also consistent with research distinguishing specific dimensions of institutional distance. Aguilera-Caracuel et al. (2013) show that differences in formal institutions require firms to adapt to host-country legal conditions, while Kostova et al. (2020) emphasize mechanisms such as unfamiliarity and adaptation costs. This is reflected in the need to adjust labeling, product documentation, customs procedures, and other operational practices. The role of importers and distributors is similarly aligned with prior evidence, as local partners provide market knowledge, regulatory support, and access to commercial networks that help firms manage institutional differences (Gaur & Lu, 2007; Shirodkar & Konara, 2017).

Overall, the findings support the view that tariff and TPU effects are shaped not only by firm characteristics, but also by the ability to manage regulatory requirements, local knowledge, and intermediary relationships.

6.3.2 Findings that nuance or extend previous evidence

A very important nuance in the thesis emerges from the adjustment channels, because literature very often places attention on pass-throughs and on price incidence. Amiti, Redding, and Weinstein (2019), for example, present a reference study on the 2018 U.S. tariffs and demonstrate that tariff costs were substantially transferred onto import prices. In the thesis, we note that the main adjustments are in the second period, 2024-2025, and that

no deterioration in relative unit values is shown. In fact, the decomposition helps us understand that the reduction of exports in the treated sector was significant, especially in the quantities rather than in the unit values, which remained positive. We can say that there is no sharp contradiction with the theory of pass-throughs, but that in this case, there is not an adjustment intended as a collapse of prices, but a reduction of quantity.

The answer to this question resides in the composition of the empirical context. The qualitative sample is composed largely of firms in the agri-food and oenological sectors, where brand identity, quality perception, differentiation, and relations with importers play an important role in competition. In such sectors, drastic drops in prices can affect brand identity or compromise the future positioning of the firm. Ludema and Yu (2016) are particularly useful for understanding this issue, since they argue that the pass-through rate depends on the productivity of the company, on quality differentiation, and on profit margins. Also, De Loecker et al. (2016) are useful for answering this question, since they explain how a cost shock does not automatically lead to a proportional increase in the final price. Several companies included in this research chose to absorb the cost shock, negotiate with the importer, or concede strategically rather than engage in general price competition.

Qualitative evidence helps us; it provides a mechanism not visible in the aggregate data. That is, tariffs transform into bargaining shocks in the export value chain. Importers would, in some cases, exploit this shock to seek further discounts or renegotiate agreements. Often, these offers are declined by structured companies with little dependence on the US, or that want to protect the brand. This expands the discussion of the classic theory of pass-through, demonstrating that the final incidence of tariffs is determined not only by prices and the elasticity of demand, but also by the bargaining power among companies, importers, distributors, and clients.

Particular importance must also be given to the dependency on importers. Participation in exports is determined by the standard theory of heterogeneous firms, based on productivity, fixed costs, and market selection mechanisms (Melitz, 2003; Bernard et al., 2018). From the interviews, another relational mechanism emerges: losing or cracking relations with an importer or distributor can mean a *de facto* exit from the market, even with a competitive product and marketing, as was clearly evident from the interview with Citra Vini. On the contrary, firms with durable and stable relationships remain longer and profitably in the

market, even with lower margins. Beyond what theory says, it can be added that besides costs and productivity, relations with intermediaries play an important role.

The second nuance concerns market exit. Empirical studies reveal that trade shocks could discourage market entry or induce exit from the same, while diversified exporters could redirect their trade flows toward new markets. For example, Meng and Wang (2023) demonstrate that companies that must face trade barriers could deflect their export flows toward other markets. The results presented in this thesis contradict this proposition in some way. Companies did not report a complete exit from the American market, but rather a reduction of marketing activities, a postponement of participation in fairs, a postponement of investment plans, and the adoption of selective pricing and diversification strategies. It seems to be a case of strategic moderation rather than strategic withdrawal. In this regard, the theory of real options provides an explanation for this situation: firms that already operate in the market could refrain from writing off sunk costs and wait for uncertainty to decrease (Dixit, 1989; Dixit & Pindyck, 1994).

Therefore, diversification must be approached with caution. The results confirm that diversification can reduce vulnerability, as suggested by Bottoni et al. (2025) in the context of Italian firms dealing with tariff tensions. However, in the case of the thesis, diversification does not necessarily entail exiting the American market. In reality, it is more of a mechanism of flexibility, with companies that often reduce dependence, but consider it always strong and attractive, ready to re-engage more aggressively once conditions stabilize. This interpretation is in line with the real options perspective, since diversification preserves strategic options rather than imposing a definitive exit.

Another contribution concerns the link between aggregate data and firm-level data. From the quantitative analysis, it clearly emerges that similarities exist between Italy and the EU27 regarding their trend, in particular in the period 2024–2025. Therefore, Italy can be used as an example of the European trend. However, the qualitative information allows for understanding why this general trend is observed at the firm level, through dependency on importers, exposure to the United States market, margins, branding, and regulation. Therefore, the contribution does not reside in generalizing Italian data to other European exporters but rather in explaining the mechanisms underlying the trends revealed by the quantitative data.

The findings also extend International Business research in two main respects. First, much of the literature on institutional distance and LOF focuses on multinational enterprises with an equity-based presence abroad, examining outcomes such as ownership, control, subsidiary survival, and performance (Gaur & Lu, 2007; Shirodkar & Konara, 2017; Trąpczyński & Gorynia, 2017). The firms analyzed in this thesis instead operate mainly through exports and external intermediaries. The results therefore suggest that some mechanisms associated with institutional distance and foreignness may also affect exporters without subsidiaries, although through different channels. In this setting, disadvantages emerge through dependence on importers, limited access to regulatory knowledge, adaptation to host-country requirements, and reduced control over pricing and distribution. These mechanisms are consistent with Zaheer's (1995) emphasis on unfamiliarity and weak local embeddedness and with Kostova et al.'s (2020) view that institutional distance should be linked to specific adaptation and legitimacy mechanisms.

Second, the findings extend prior evidence regarding the form of the strategic outcome. Previous studies often associate institutional distance with lower subsidiary performance, reduced survival, or greater financial risk (Gaur & Lu, 2007; Lindner et al., 2016; Shirodkar & Konara, 2017). In this thesis, however, firms did not generally abandon the U.S. market. Instead, they reduced their commitment through lower volumes, delayed investments and promotional activities, and greater attention to alternative markets. This suggests that continued market presence does not necessarily indicate that institutional constraints are weak. Firms may remain active while committing fewer resources than they would under more stable and manageable conditions.

Strategic moderation therefore represents an intermediate outcome between continued expansion and market exit. It allows firms to preserve market access while limiting exposure to tariff-related uncertainty and institutional complexity. The findings also indicate that pre-existing regulatory requirements can become more strategically significant when combined with tariffs and TPU, as firms respond to the cumulative burden of cost pressure, policy instability, compliance demands, and dependence on local knowledge (Aguilera-Caracuel et al., 2013; Peng et al., 2008, 2009).

These extensions should nevertheless be interpreted cautiously. Institutional distance was not directly measured, and the qualitative evidence derives from a geographically and sectorally concentrated sample. The findings therefore provide preliminary evidence that

International Business mechanisms traditionally applied to subsidiaries may also help explain selective adjustment and restrained commitment among exporters.

6.4 Contribution and implications

6.4.1 Theoretical and empirical contribution

As its main contribution, this thesis connects the sector-level pattern of trade to firms' strategic responses. The central aim has been to explain how TPU and U.S. tariffs affect European exporters, and specifically Italian ones. The thesis does not consider tariffs as a mere cost shock but tells us that the impact is mediated by heterogeneity, therefore by the different characteristics, uncertainty, commercial relations, and exposure. It allows the thesis to make a step forward from a simple analysis of the contraction of exports, going on to highlight a nuanced process of strategic moderation.

From a theoretical point of view, this study enriches the literature by integrating different perspectives that have been analyzed separately until now. From the quantitative point of view, the data indicate that tariff-exposed sectors result in relatively weaker performance compared to the pharmaceutical industry, especially in terms of volume. From the qualitative point of view, the data can be used to understand this phenomenon, indicating that companies generally do not abandon the American market; however, they reduce their commitment by delaying investments, reducing promotion, applying selective pricing, and planning with caution. In this case, the importance of trade policy uncertainties and of real options is justified, since firms do not commit to actions that cannot be undone in an uncertain context.

The theoretical contribution is further specified from the perspective of heterogeneous firms. TPU and real options theory showcase why uncertainty is a problem and why it is necessary to be cautious, while heterogeneity tells us what differs and why it is different among the different companies. Certainly, the sectoral difference also counts, with better sectors like pharmaceuticals and worse ones like iron and steel or machinery. The thesis equates the importance of company characteristics, such as dependency on the United States, relations with importers, brand positioning, diversification, and the flexibility of margins, which determine the way in which firms absorb or react to the shock. In this sense, the thesis

extends the discussion from sectoral exposure to the concrete strategic constraints that firms must face.

From an empirical point of view, the contribution of the present study resides in the use of data relative to the EU27 and to Italy, integrated with qualitative data coming from Italian exporters. The contribution does not consist of a generalization of the data collected from the interviews, but rather in an analysis of the same. The qualitative data are useful to understand the reasons for the weakening compared to other factors, including the lack of exit routes from the market, the drop in volumes without a corresponding decrease in unit values, and the dependency on importers.

The thesis is further enriched by the integration of trade-policy research with international business perspectives. In fact, tariffs and TPU can be interpreted in a more extensive way compared to mere economic or uncertainty shocks. They can be considered as changes in the formal environment governing foreign-market activity, consistent with the institutional perspective of Peng et al. (2008, 2009). This perspective helps us to understand why the responses of exporters depend on the ability to manage regulatory requirements or access to local information.

The results indicate furthermore that institutional distance and the LOF can influence firms independently of the fact whether they have a foreign subsidiary or not. The relationship among foreignness, lack of familiarity and weak rooting is highlighted by Zaheer (1995), while Kostova et al. (2020) underline the importance of adaptation costs deriving from the difference between institutional systems. Within the scope of the thesis, such mechanisms concretize themselves under the form of compliance costs, dependency on the importer and lesser control over operations in the host country. The international business perspective therefore complements the real-options and firm-heterogeneity perspectives.

6.4.2 Practical and policy implications

The findings also have practical and policy implications, identified through specific mechanisms in the study rather than by generic arguments about tariffs and SMEs. The first implication is that, for the exporter, the support must not only compensate for the cost relative to the tariff. This is evidenced by firms that postpone investments, reduce marketing

activities, or limit commitments under uncertainty. Public support should consequently help companies also with these problems that emerge with uncertainty. Marketing activities and trade fairs are often important activities for companies abroad, which allow one's presence to be felt in a foreign territory, even when firms are not currently in a position to pursue active market development.

Another aspect to consider is the issue of information and of planning support. Some companies stated that the uncertainty linked to the situation represented a greater challenge compared to the management of the tariff issue, since it affects forecasts, negotiations with partners, and strategic planning for the coming years. This is evident, for example, in the case of companies that postponed market development activities due to the inability to formulate accurate forecasts of future commercial conditions in the United States. This implies that companies can benefit greatly from better and more timely information regarding possible changes in policies and tariffs within the target market.

The third implication concerns the relationship between the importer and the distributor. From the results, it clearly emerges that entry into the United States market involves collaboration with certain importers and that the eventual rupture of such relationships significantly affects the capacity of firms to survive within the market. Therefore, export policy must not limit itself to addressing issues of competitiveness or of prices within the destination market, but must also help firms to create, diversify, and consolidate their own distribution networks. The possible solutions could include facilitating the identification of reliable importers, commercial negotiation, and avoiding dependency on a single intermediary.

Managerial implications also emerge from the findings. One of these is that for companies highly exposed to the United States market, they must not wait for a shock to diversify, importers, or markets. More products and stronger brands can mean having the power to resist eventual further requests, always having a strategy for value protection beforehand. In situations of high TPU, it can be better to use scenario planning rather than precise forecasts, because it involves preparing multiple plans for multiple outcomes or different policy trends rather than assuming a single trajectory.

Consequently, it appears evident that the type of support should also depend on the sectors and on the levels of exposure. While firms with high exposure might necessitate support to

maintain their relationships and attenuate temporary shocks, those with low exposure could benefit more from support aimed at diversification. Furthermore, firms that encounter difficulties related to the FDA, labeling, documentation, and logistics might need regulatory support rather than monetary support. In fact, one of the most important implications of this thesis is that support based on tariffs should not cover only tariff costs, but also the strategic factors that determine whether firms invest, reduce, or shift their exposure toward the United States.

According to the theories of international business, the knowledge of regulations should not be only an administrative function but also a strategic ability. From this perspective, it would be insufficient to analyze foreign markets only through demand, margins and existing tariffs. The resources that are needed to interpret the rules, maintain compliance and a coordination with local partners should be integrated to this analysis. As underlined by Peng et al. (2008, 2009), institutional conditions shape strategies and choices, therefore internal knowledge of American procedures would reduce uncertainty, and would improve the capacity to respond without leaning on external actors.

Furthermore, the results of the research indicate that relationships with importers must be managed in an active way. Although importers can help to overcome the lack of familiarity and have access to local information, relying excessively on them could limit the control of exporters over prices, over distribution and over market information. This can be considered as the LOF discussed by Zaheer (1995). To face this issue, exporters must identify alternative sources of information, define clear rules regarding the activities of intermediaries and dispose of sufficient organizational resources to evaluate in an independent way normative changes and market dynamics.

7 Conclusions

In this thesis, one examines how European exporting companies, particularly Italian ones, have responded strategically to tariffs imposed by America, amid the contextual increase in trade uncertainty. The study assumes that tariffs should not be interpreted as a cost shock but as part of a broader environment of uncertainty that can modify expectations, planning, and commitment in markets. The research concentrated on European exports toward the United States, using Italy as an exemplary case in a broader context of the EU27, and combined a quantitative analysis of exports, in context with qualitative data obtained from interviews conducted with exporting firms.

The main research question was: How do European exporting firms respond strategically to U.S. tariff policies and associated trade policy uncertainty? The main answer that emerged is not immediate market exit. Rather, it can be summarized as strategic moderation. Being in the American market, attractive, powerful, and economically strong, the tendency of firms is to remain, but in their behaviors, they become more cautious and seek to reallocate resources. Moderation happens under vastly different forms, such as negotiations, absorption of tariffs, modifications to planning horizons, and others. The effects of tariffs are not shown only in values or quantities, but especially in the intensity and commitment of firms in the United States.

These quantitative results confirm such a vision. As illustrated previously, the econometric estimate demonstrates that the impact on the sectors exposed to tariffs was stronger compared to that on the pharmaceutical industry in both comparison groups used in the study. During the first phase of the analysis, in which 2016 was compared with the 2017-2020 period, the aggregate DiD coefficient for the treatment group resulted in a value equal to about -0.295, which is equivalent to a relative decrease of the export orientation of the United States of about 25-26% compared to that of the pharmaceutical sector. In the second phase, considering the 2024-2025 period, the aggregate DiD coefficient remained negative and statistically significant, but of a smaller magnitude, about -0.163, which corresponds to a relative reduction of export orientation of about 15%. These results show that, despite the existence of such relative weakness, this trend did not transform into a total collapse of the export orientation of the United States.

The main finding of the econometric analysis is that the weakening of the treated sectors is mainly relative to quantities rather than to unit values. In the first period, the coefficient in quantities is negative and statistically significant, whereas the coefficient in unit values is negative but not statistically significant. In the second period, the effect on quantities became even more evident, and the component on unit values became positive. Specifically, it indicates that the exposed sectors did not lose ground because unit values weakened, but rather there was difficulty in maintaining the same physical intensity (quantity) toward the United States, if compared to the pharmaceutical sector. This is important because it modifies the interpretation of the results: the adjustment does not concern simply a reduction of prices or a loss of value, but a lesser relative presence on the United States market.

This finds further confirmation in the results at the sectoral level. In the initial period, all sectors subject to tariffs registered negative trends compared to the pharmaceutical sector, although in different measures. Sectors such as food, iron and steel, machinery, and beverage suffered relatively more marked effects, while the aluminum ones showed a less pronounced effect and a greater ambivalence in terms of impact on productivity growth. Regarding the food, iron and steel, and machinery sectors, the analysis indicated that the underperformance of these sectors was determined mainly by the variations in volumes. The case of beverages was in some way exceptional, since its weak performance was determined by relative unit values. However, in the most recent period, the effect became more uniformly quantitative for the sectors under examination.

The qualitative part is of notable help in explaining the mechanisms behind the quantitative patterns mentioned above. From the interviews, it emerged that companies do not interpret tariffs as a mechanical cost, but as part of a negotiation process that involves importers, exporting companies, distributors, and final clients in some cases. Some companies were able to tighten their margins and meet clients; others could not, margins already being tight. Some of the interviewees told us that the additional costs relative to tariffs were distributed along the value chain, but importers sometimes use them to receive additional discounts. Depending on the positioning of the company, on its dependency on the market, and on its bargaining power, the same tariff shock can involve a compression of margins, a partial absorption of costs, selective adjustments of prices, or a more cautious approach towards future commitments.

The interviews also demonstrated that companies perceive uncertainty as more dangerous than the tariff, which instead can be managed, absorbed, or shared. The difficulty in the management of uncertainty lies in the fact that it alters planning periods. This translated into postponed trade fairs, postponed investments, reduced marketing activities, more frequent revisions of business plans, and greater caution in committing resources in the United States market. This finding is consistent with the theory of real options, according to which uncertainty increases the value of waiting if there are sunk costs or partially irreversible investments (Bernanke, 1980; Dixit & Pindyck, 1994). This is furthermore in line with the literature on uncertainty in the matter of trade policy, according to which firms react not only to current tariff rates, but also to the possibility of future political changes (Handley, 2011; Handley & Limão, 2017).

Another equally significant result is that firm heterogeneity assumes fundamental importance. There is no one-size-fits-all reaction to the shock caused by tariffs in every case. From the interviews, it emerged that the strategic response depends on the entity of the activities of the company in the United States, on its dependency on importers, on its dimensions, capacities, positioning, and diversification. Companies that operate prevalently or are strongly dependent on the United States have no other choice but to sustain the costs associated with the tariffs or go forward and invest more, despite the uncertainties about the future. Meanwhile, less-exposed companies, or those that operate in multiple export markets, can choose a different path, such as reducing commitments, concentrating on other countries, and postponing investment decisions. This inserts itself into the paradigm of heterogeneous firms that emerged in the literature (Melitz, 2003; Bernard et al., 2018).

Another contribution that is deduced from the thesis resides in the study of the role of importers and distributors. Existing research related to heterogeneous firms and to the uncertainty of trade policies usually addresses the issue from the point of view of productivity, of sunk costs, of market entry, and of diversification. The latter are truly relevant factors, but the results of the thesis suggest that relations with intermediaries can constitute an additional strategic tool. For several exporting firms, access to the United States market depends not only on the competitiveness of the product or on the internal capacities of the company, but also on the strength and reliability of the intermediaries in question. In fact, good relations with intermediaries can be useful for sharing the cost of tariffs, guaranteeing access to the market, and remaining on the market independently of the period

of uncertainty. At the same time, dependence on a single importer entails a certain vulnerability. If a problem occurs in the relationship with the intermediary, the exporting company will be *de facto* less exposed to the United States market, even if it does not intend to abandon the market in question.

Non-tariff barriers and regulatory frictions, even if they are not the main focus of the thesis, are an area of research of the thesis, and they represent an additional layer of complexity. FDA requirements, the obligations foreseen by the Food Safety Plan, the procedures related to PCQI, labeling, documentation, logistics, and customs delays make it difficult to operate in the United States, but they are not equal for all firms; they vary by sector. Moreover, it was noted that larger, more structured exporters often have staff dedicated to bureaucracy and compliance, which makes this not a problem. Smaller companies, instead, can see this as a burden, a higher fixed cost, especially if there is a need for external consultants to solve this. Therefore, non-tariff barriers are added to the tariff channel and to the uncertainty channel, increasing the overall burden of market access.

There are also indications from the findings that suggest that TPU and tariffs operated in a larger foreign institutional environment. Measures such as regulatory requirements, customs procedures and dependency on intermediaries increased the efforts to operate on the American market. It is a perspective that allows us to interpret these frictions as specific manifestations of formal institutional distance and LOF, rather than as simple differences between Europe and America. As underlined by Peng et al. (2008, 2009), institutional conditions shape corporate strategic choices, and these cases are a demonstration of it.

In general, the thesis brings three main contributions to literature. In the first place, it demonstrates that any analysis of tariff shocks should not be based exclusively on aggregated export values. The distinction between value, volume, and relative unit value is necessary since the dominant adjustment mechanism identified in the research is linked to volume. In the second place, this thesis connects macroscopic quantitative trends to the microscopic strategies of firms. Trade statistics demonstrate that exposed sectors suffer a relative decline, while the interviews illustrate that this can occur because of the cautious planning strategy, margin protection, negotiations with the importer, and selective commitment to the market. Finally, this contribution concerns the theme of the heterogeneity of firms. Besides the differences at the sectoral and company level, adjustments vary according to relationships,

in particular those with importers and distributors in terms of access to the United States market.

Beyond these three contributions, the thesis also integrates trade-policy research with an International Business perspective. As indicated by the results, both institutional distance and the “liability of foreignness” can influence the exporting firm even in situations in which it has not constituted any foreign subsidiary. In this study, such factors manifest themselves through the burden of regulatory compliance, the dependency on the importer, as well as the lack of control over market information. Therefore, strategic moderation could not only reflect caution in conditions of uncertainty, but also a presence abroad characterized by a limited involvement with institutions.

From a managerial and policy perspective, the main implication is that tariffs must not be treated solely as a cost problem. To manage this, firms should prepare in advance with tools like scenario planning to cover themselves from uncertainty, have clear agreements with importers, and implement margin protection and protection strategies. Policymakers should protect companies not only by compensating for tariff costs but also by offering more practical support tools. The main obstacles identified in the study that concern uncertainty are market evolution, dependency on importers, and regulatory complexity. Therefore, effective support should also comprise better information on developments in the United States' trade policy, assistance with compliance procedures, as well as initiatives that help firms identify and diversify reliable distribution partners. The thesis, finally, finds that resilience does not depend solely on the absorption of tariffs, but on the managerial ability to remain active, agile, visible, and flexible in the American market.

The analysis presents several limitations, furthermore. First, the quantitative approach does not use firm-level export data but only trade data at the sectoral level. Consequently, it is not able to identify the specific decisions taken by firms, nor to establish whether the observed changes are due to the market exit of some companies, to a decrease in shipment intensity, to changes in products, or to changes in clientele. One must take into account another important limit of the DiD methodology. Although it is justified to use the pharmaceutical industry as an example of a sector less exposed to United States trade restrictions and therefore more resistant to their effect, the pharmaceutical sector cannot be considered a perfect counterfactual case for all treated sectors. In particular, this limitation is crucial for the first estimation period, since the 2017-2020 period is affected by an incredibly significant

external factor: the global COVID-19 pandemic. In fact, the year 2020 was characterized by a significant disruption of international trade flows caused by external factors unrelated to the tariffs imposed by the United States government.

Also, from the qualitative part, some limitations emerge. Although the interviews provide a fairly descriptive picture of how companies respond to tariffs and TPU, the sample is small and exploratory in nature. In fact, it cannot be approximated to all European exporters, nor even Italian ones. Moreover, the sample is concentrated very much on companies with good international exposure. The thesis from this point of view and from how it was conceived, goes more to examine the strategic responses of already exporting companies than to see the potential for entry into the American market in the first place. Finally, the study concentrates mainly on Italy in a broader European context; the transferability of the results to other EU countries should be evaluated with caution.

Institutional interpretations are also subject to limitations. In fact, there has never been a real measurement of institutional distance and the thesis does not separate the effects of distance from the specific characteristics of the American institutional environment. Furthermore, the qualitative evidence reported in the thesis is composed of exporting companies toward the United States and is therefore not precisely faithful to the literature that often uses cases of companies with subsidiaries abroad. The findings in this area for these reasons have an exploratory measure and should not be interpreted as establishing a causal relationship between institutional distance and the responses of exporters.

Further research could follow this approach in more specific areas. For example, one could gather company-level information on commercial practices or transactions to verify whether the strategic moderation highlighted in this thesis depends on whether the sector deals in differentiated or standardized products. The proposition would be particularly relevant, since the qualitative analysis demonstrated that brand positioning and product uniqueness are determining factors in evaluating the capacity of firms to resist pressures on prices. In the second place, future research could examine the extent to which the dependency on a single importer/distributor can be evaluated using available data and the effect of such dependency on the reduction of exports. Third, a comparative analysis across EU member states could assess whether the findings for Italian firms extend to exporters operating in different institutional, financial, and export-support systems. In the fourth place, long-term data collection could determine whether the strategic moderation was simply a temporary

reaction to economic uncertainties or rather a new market-orientation policy toward the United States economy.

Further studies could foresee a comparison between exporters that dispose of a subsidiary in the United States and those that are without one, in order to verify whether experience in the host market, regulatory knowledge and dependency on the importer influence the reactions to tariff policies and relative to TPU. Institutional distance could be analyzed based on the specific country and sector, as suggested by Kostova et al. (2020).

To conclude, the thesis shows that the impact of American tariffs and correlated TPU on European exporters is neither reducible to a single decline of export value nor can one say that it is uniform. The main response is indeed strategic moderation, leading to more cautious investments and commitments in the United States. In fact, it is seen as especially important, but companies take it slowly, diversifying, reducing promotional efforts, and postponing investments. The main conclusion is that the uncertainty associated with tariffs does not necessarily push firms to abandon the market immediately; rather, it modifies the degree of commitment they are willing and able to assume in that market. This makes strategic moderation, rather than market exit, the most accurate interpretation of the company-level response observed in this thesis.

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Appendix 1. Questionnaire

Strategic Responses of Italian Firms to U.S. Tariffs and Trade Policy Uncertainty

0. Interviewee Background

0.1 Could you briefly describe your role in the company? (e.g., function/department)

0.2 How long have you been in this role and in the company?

0.3 What prior experience do you have related to international markets and/or the U.S. market?

1. Company and U.S. Market Exposure

1.1 Could you briefly describe your company and its products/services?

1.2 How important is the U.S. market for your business today? (e.g., relative importance compared to other markets; strategic relevance, exposure)

1.3 How do you operate in the U.S. market (mode of operation)?

Prompts:

- Direct exporting vs. indirect exporting (via distributors/importers)
 - E-commerce / direct-to-consumer channels
 - Local partners/agents
 - U.S. subsidiary / branch / local warehouse or fulfilment
 - Other arrangements
-

2. Impact of Tariffs vs. Policy Uncertainty

2.1 In what ways have U.S. tariffs introduced in recent years affected your company? (e.g. price, margins, sales volumes)

2.2 In your experience, what has been more challenging: the tariff level itself or uncertainty about future U.S. trade policies? Why?

2.3 Has the introduction or threat of new tariffs changed how you plan in the medium to long term?

3. Strategic Decisions and Responses

3.1 Thinking about tariffs specifically, have they influenced any major decisions you made?

3.2 Thinking about policy uncertainty specifically, has it influenced any major decisions you made?

3.3 What tactical or operational adjustments have you implemented in response to this environment? (e.g. packaging or price adjustments)

3.4 Have you made (or considered) broader strategic changes? (e.g. market diversification or changes in distribution structures)

3.5 How reversible are the investments and commitments related to the U.S. market?

4. Uncertainty Outlook and Counterfactual

4.1 To what extent does uncertainty about future U.S. trade policy influence your current strategic thinking today?

4.2 If the tariff framework and trade policy outlook were stable and predictable, would your approach to the U.S. market be different? In what way?

5. Operational/Regulatory Frictions

5.1 In the last 12–18 months, have you experienced any recent changes in operational or regulatory frictions when exporting to the U.S.? (e.g. customs delays, additional controls)

5.2 If yes, how significant have these been compared to tariff-related challenges?

Appendix 2. Tariffs timeline

First Term: 2017–2021, "America First" and the opening tariff wave

Trump's first term marked a dramatic departure from decades of multilateral trade liberalization. Under the "America First" banner, the administration imposed sweeping tariffs on steel and aluminum globally, launched a full-scale trade war with China, and deployed tariffs selectively against the EU in response to the longstanding Airbus–Boeing subsidy dispute. For Italy, whose export economy depended heavily on industrial goods and agri-food products bound for the U.S. market, the measures created measurable but manageable disruption.

First Presidential Term (January 20, 2017 – January 20, 2021)		
Date	Event / Measure	Rate / Scope
Jan 2017	Trump withdrew the U.S. from the Trans-Pacific Partnership (TPP) in the first days of his presidency, signaling a shift away from multilateral trade frameworks.	Symbolic
Jan–Feb 2018	Tariffs of 20–50% imposed on imported washing machines and 30% on solar panels, citing safeguard provisions. Primarily targeting Asian manufacturers; limited direct impact on Italy.	20–50%
Mar 2018	Trump announced Section 232 tariffs in March 2018, but the EU was granted temporary exemptions. These expired on June 1, 2018, when the tariffs began to apply fully to EU steel and aluminum exports.	25% / 10%
Jun 2018	EU exemptions expire; Section 232 tariffs take full effect on European steel and aluminum, covering €6.4 billion of EU exports. Italy's steel exports to the U.S. increased by 13.9% and aluminum by 22.4% in 2018, as Italy partially replaced other suppliers unable to compete.	25% / 10%
Jun 2018	EU retaliates with targeted countermeasures on €2.8 billion of U.S. goods (Annex 1), including bourbon, Harley-Davidson motorcycles, and orange juice, effective immediately. A second tranche (Annex 2, €3.6 billion) is deferred.	EU retaliation
Oct 2019	Following a WTO ruling in the Boeing–Airbus dispute, the U.S. imposed tariffs of 10–25% on \$7.5 billion of EU goods. Italian agri-food products, including Parmigiano Reggiano and Pecorino, are hit with 25% tariffs.	10–25%
Jan 2020	Section 232 tariffs extended to derivative steel and aluminum products (e.g., nails, wire, cables) via Proclamation 9980: 25% on steel derivatives, 10% on aluminum derivatives. EU again among those affected.	25% / 10%

Jan 2020	"Phase One" trade deal signed with China, pausing further escalation in the U.S.–China trade war. No comparable agreement reached with the EU. Context: China commits to purchase \$200 billion more in U.S. goods over two years, a target never fully met.	U.S.–China only
May 2021	Under the newly elected Biden administration, the EU temporarily suspended a scheduled round of retaliatory tariffs while the US and EU opened negotiations on steel and aluminum overcapacity.	Status quo

Key outcomes of the first term: U.S. customs revenues more than doubled, rising from \$39 billion (Q1 2017) to \$81 billion (Q1 2021). However, economists found that tariff costs were borne almost entirely by U.S. importers and consumers. A 2019 Federal Reserve analysis found that the tariffs reduced rather than increased manufacturing employment in affected sectors, contrary to their stated objective.

Second Term: 2025–present, Escalation, "Liberation Day," and a partial détente

Returning to the White House in January 2025, Trump escalated his tariff agenda significantly. The second term saw a broader geographic scope, higher rates, and faster sequencing than the first. The EU and Italy initially faced the prospect of sweeping "reciprocal" tariffs before a 90-day pause allowed space for negotiation. A bilateral deal was ultimately reached in July 2025, though at a cost described by industry bodies as substantial.

Second Presidential Term (January 20, 2025 – present)		
Date	Event / Measure	Rate / Scope
Jan 20, 2025	After the second mandate election for Donald Trump, Tariff policy was signaled as a day-one priority; IEEPA would later be used to justify unilateral tariff measures.	—
Feb 1, 2025	Executive orders impose 25% tariffs on Canada and Mexico, and 10% on China, effective February 4. The EU is put on notice. Trump cites border security and fentanyl trafficking as justification, not commercial imbalance.	25% / 10%
Feb 10, 2025	Trump announces 25% tariffs on all steel and aluminum imports globally, reinstating and expanding the first-term Section 232 measures. The EU, including Italy, is included with no exemptions.	25% (steel) / 25% (Al)
Mar 4, 2025	China tariffs rose from 10% to 20% after a brief suspension of Canada/Mexico tariffs. U.S.–China trade tension escalates. EU watches closely: Confindustria warns of a potential 0.4% GDP contraction for Italy in 2025.	20% (China)
Mar 12, 2025	Section 232 steel and aluminum tariffs formally entered into force against the EU. The EU announces it will reinstate its suspended Annex 1 and 2 countermeasures from 2018, covering €4.8 billion of U.S. goods, effective April 1, 2025.	25% / 25%
Apr 2, 2025 ("Liberation Day")	Trump signs an executive order imposing "reciprocal" tariffs: a baseline of 10% on all imports worldwide (effective April 5), plus country-specific surcharges. The EU faces a country-specific reciprocal tariff rate of 20%, with the 10% baseline included in that rate, effective April 9. Italy's top U.S.-bound exports, machinery (€13 bn), pharmaceuticals (€10 bn), and transport equipment (€8 bn), are all exposed.	20% (EU)
Apr 5, 2025	The 10% baseline tariff enters into force globally. EU countermeasures are later pending during the negotiation window.	10% (all)
Apr 9, 2025	The higher country-specific tariffs (20% on the EU) enter into force. However, on the same day, Trump announced a 90-day suspension for all countries except	10% (EU, paused)

	China, reverting to the 10% baseline for most partners. China's rate reaches 145%. EU tariffs revert to 10% during the pause. EU countermeasures are suspended for 90 days in parallel.	145% (China)
Apr 11, 2025	White House memorandum exempts semiconductors, smartphones, and consumer electronics (including items assembled in China) from the reciprocal tariffs. Temporary, with no stated end date.	Exempt (tech)
May 9, 2025	U.S.–UK bilateral tariff arrangement announced. The UK maintains a 10% reciprocal tariff rate on most goods, while the first 100,000 UK vehicles exported annually to the U.S. are subject to a 10% tariff; vehicles above that quota remain subject to 25%.	UK deal
May 12, 2025	U.S.–China 90-day truce: tariffs reduced bilaterally, from 145% to 30%; China from 125% to 10%. The trade war temporarily de-escalated. Context for EU: pressure to conclude its own deal intensifies.	30% (U.S. on China)
Jun 4, 2025	Section 232 steel and aluminum tariffs doubled from 25% to 50% for all countries, including the EU. Italy's €2.73 billion in annual steel/aluminum exports to the U.S. face significantly higher costs. The UK is the only country exempted under the May deal.	50% (steel & Al)
Jul, 2025	U.S.–EU preliminary tariff agreement reached. A 15% tariff is set as the new baseline on most EU goods entering the U.S. (replacing the 20% "reciprocal" threat and absorbing prior measures). Automotive tariffs drop from 27.5% to 15%. EU commits to purchase \$750 billion in U.S. energy and invests \$600 billion in U.S. markets. Steel and aluminum remain at 50%. For Italy: direct impact on exports estimated at €8–10 billion; the wine sector alone estimates losses of up to €317 million in the first year.	15% (most goods) 50% (steel & Al)
Aug 12, 2025	U.S.–China 90-day truce extended for another 90 days (to November 10, 2025) following negotiations in Stockholm. U.S. maintains 30% rate; China maintains 10%.	30% (China)
Feb 21, 2026	The U.S. Supreme Court (6–3) strikes down IEEPA-based tariffs, ruling Congress has not delegated such broad tariff authority to the executive branch. The constitutional status of tariffs imposed under IEEPA, including many second-term measures, is placed in legal uncertainty. Outcome of subsequent legislative or executive responses: pending at time of writing.	Legal ruling

Key outcomes of the second term (to date): Confindustria estimated that a prolonged tariff escalation could reduce Italian GDP by 0.4% in 2025 and 0.6% in 2026. The July 2025 U.S.–EU deal, at 15% on most goods, averted the worst-case scenario but still imposed a meaningful cost on Italian exporters, particularly in wine, machinery, and pharmaceuticals. The Supreme Court ruling of February 2026 introduced significant legal uncertainty over the durability of the second-term tariff architecture.

Appendix 3. Robustness check and diagnostic checks

In this section, robustness checks were carried out. On this occasion, the main dependent variable was redefined; in fact, it is a broader denominator that includes the total exports to the United States of the two reporters, and no longer the sector-specific benchmark markets of the baseline specification. The export share was constructed as the ratio of sectoral exports to the United States to the reporter's total exports to the United States. This allows us to measure the relative weight of each sector included in the general portfolio of exports to the US of Italy and the EU. In practice, it serves to measure whether the main findings depend on the original benchmark-based denominator or if the same patterns are visible from this broader and more demanding version.

First period

In the first robustness specification, using the 2016–2020 sample in which 2016 represents the pre-period and 2017–2020 the post-period, the coefficient of the treated: post_trump1 term is equal to -0.472509 with $p = 0.000169$. In percentage terms, this implies an estimated relative reduction of 37.6% in the share of the treated sectors in the reporter country's total exports to the United States, compared to the pharmaceutical sector.

The implication of this result is twofold. Firstly, the sign and significance remain respectively negative and high, indicating that the key result is consistent even when the denominator is expanded from the sector-specific benchmark to the total value of exports to the United States. Secondly, the result is economically sensible, although slightly broader than that obtained in the main specification based on the log share. In substantive terms, this indicates that during the first period of the Trump presidency, the treated sectors not only performed relatively worse compared to their own reference market but also had a relatively lower weight within the entire basket of exports directed to the United States.

At the same time, the interpretation must remain disciplined. This does not mean that the treated sectors collapsed in absolute terms, nor that tariffs mechanically reduced their exports by 38%. Rather, it means that their relative position within exports directed to the U.S. market weakened compared to the pharmaceutical sector, which continued to maintain a stronger position.

Second period

The same robustness exercise was then conducted for the 2024–2025 sample, in which 2024 represents the pre-period while 2025 serves as the post-period. For this estimate, the coefficient of the `treated:post_2025` term is equal to -0.355338 with $p = 0.000747$. This represents a relative reduction of approximately 29.9% in the export share of the treated sectors compared to the pharmaceutical sector within the exporting country's total exports to the United States.

Consequently, the results suggest that even the more recent period shows a similar negative relative difference in favor of the untreated sectors, based on a broader definition of exposure. The pattern in terms of sign is therefore clearly consistent with the baseline estimates. However, the implication of this specification is that the relative difference becomes even more marked compared to what was observed in the pooling model based on baseline estimates. Nonetheless, it would perhaps be prudent to emphasize that this does not necessarily imply that the second period is economically more significant than the previous one.

Heterogeneity robustness check

First period

A reporter-specific version of the alternative denominator model was then estimated in order to verify whether the robustness pattern differed between the EU27 and Italy. For the first period, the coefficient on `treated:reporterEU27:post_trump1` is equal to -0.462702 with $p = 0.000028$, while the coefficient on `treated:reporterItaly:post_trump1` is equal to -0.482315 with $p = 0.000643$. In percentage terms, this corresponds to estimated relative drops of approximately 37.0% for the EU27 and 38.3% for Italy.

The coefficients in question are very close in magnitude and therefore also highly significant for the analysis. This test leads us, quite certainly, to confirm that the sectors that had lower performances compared to pharma are not just an Italian phenomenon, but more general and extended to the European Union. The coefficient relative to the variable `treated:reporterItaly` is equal to 0.765565 with $p = 0.01444$, which indicates that the baseline gap between “treated” and “pharmaceuticals” varies slightly between reporters with this alternative denominator. However, this does not change the main conclusion. The post-period interaction terms for both reporter groups show a very similar negative shift after 2016.

Second period

The same robustness test based on a reporter-specific estimation was also conducted for the comparison period 2024–2025. In the regression model, the coefficient associated with `treated:reporterEU27:post_2025` results equal to -0.334770 ($p = 0.000732$), while the coefficient associated with `treated:reporterItaly:post_2025` is equal to -0.375907 ($p = 0.000913$). This implies estimated relative variations equal to approximately 28.4% for the EU27 and 31.3% for Italy.

As before, the two coefficients show a notable similarity. It can be stated that Italy presents in this case a slightly more negative effect compared to the EU27; however, such a difference is not sufficient to allow a definitive conclusion regarding the presence of a specific Italian trend. From this point of view, the drop can be interpreted as a comparative characteristic common to the two reporters, without the emergence of an Italian exception. Regarding the coefficient associated with `treated:reporterItaly`, its value was estimated at 0.509251 ($p = 0.08445$).

Alternative dependent variable: $\log_share_total_us = \log(value_us / total_us_reporter)$. Measures each sector's weight within the reporter's total export portfolio to the U.S.

	Period 1 (2016–2020)		Period 2 (2024–2025)		Approx . %	Dep. Var.: $\log_share_total_us$
Variable	Coeff.	Sig.	Coeff.	Sig.	P1 / P2	= $\log(\text{sector US value} / \text{total reporter US value})$
treated:post_trump1 / treated:post_2025 (pooled)	-0.473	***	-0.355	***	-37.6% / -29.9%	Pooled
treated:reporterEU27:post_trump1 / treated:reporterEU27:post_2025	-0.463	***	-0.335	***	-37.0% / -28.4%	Reporter-specific
treated:reporterItaly:post_trump1 / treated:reporterItaly:post_2025	-0.482	***	-0.376	***	-38.3% / -31.3%	Reporter-specific
treated:reporterItaly (baseline gap)	+0.766	* ($p=0.014$)	+0.509	($p=0.084$)	pre-existing	Does not alter the main result
Year FE	✓		✓		Both periods	
Reporter FE	✓		✓		Both periods	
SE	Clustered (sector)		Clustered (sector)			
N	720		288			
Within R²	0.104		0.213			

Within R² values: Pooled P1 = 0.104, Pooled P2 = 0.213. Reporter-specific models show consistent direction and significance across both periods and denominators.

Table A1- Alternative Export Share Robustness Check

Additional Benchmarking Against Aggregate Export Flows

In addition, the robustness checks were carried out with each sector being compared not only with pharmaceuticals, but also with aggregate exports. This test has been added because pharmaceuticals can be considered a particularly strong and reliable control group. Consequently, the negative sign of the coefficient when comparing each treated sector with pharmaceuticals does not mean that the sectors themselves are experiencing a general decline, but partially shows the exceptionally good results of the control group. As a remedy for this, the total exports are chosen as an alternative control group. The dependent variable is still defined as $\log_share$, and each sector is compared with aggregate exports.

The pooled comparison of the treated sectors with total exports is crucial from the perspective of an additional qualification. In the first period, that is, 2016 versus 2017–2020, the coefficient on $treated_total \times post_trump1$ equals 0.009087 with $p = 0.85008$. Thus, there is no significant gap between the treated sectors and aggregate exports in the first period. This shows that the exceptionally negative gap with pharmaceuticals in the baseline model does not imply that the treated sectors experienced any underperformance during the first Trump period. Rather, it reflects to a considerable extent the fact that pharmaceuticals expanded more strongly than the average export trend. The sector-by-sector comparison against total exports confirms this interpretation. In the first period, aluminum shows a positive coefficient (**0.182354**, approximately **+20.0%**), while food is almost aligned with the aggregate trend (**0.027197**, approximately **+2.8%**). Beverages (**-0.049889**, approximately **-4.9%**), iron and steel (**-0.071368**, approximately **-6.9%**), and machinery (**-0.042861**, approximately **-4.2%**) show only mild negative deviations. Overall, there is no evidence of a broad sectoral collapse relative to total exports in the first period.

The picture changes moderately in the recent phase. In the pooled 2024–2025 comparison, the coefficient on $treated_total \times post_2025$ is **-0.062470** with $p = 0.03909$, corresponding to an approximate relative decline of **6.1%**. This indicates that, unlike in the first period, treated sectors display a modest underperformance even relative to aggregate exports. However, the sector-level results show that this effect is not uniform: aluminum is virtually aligned with the total (**-0.000827**), while food (**-0.049180**) and machinery (**-0.038351**) show only small negative deviations. The weakness is more visible for beverages (**-0.090319**, approximately **-8.6%**) and especially iron and steel (**-0.133674**, approximately **-12.5%**).

Finally, pharmaceuticals were also compared directly with total exports. The coefficient is **0.303612** in the first period ($p = 0.000172$), implying an approximate outperformance of

35.5%, and 0.100834 in 2024–2025 ($p = 0.075641$), implying an approximate outperformance of 10.6%. This confirms that pharmaceuticals are not a neutral, average benchmark but rather a particularly strong sector, especially in the first period. Therefore, the robustness check does not overturn the main findings; rather, it refines them. The treated sectors clearly underperform relative to pharmaceuticals, but only moderately and mainly in the recent period, relative to aggregate exports.

Benchmark comparison	Period	Sector or group	Coefficient	Approx. % effect	p-value	Interpretation
Treated sectors vs total exports	First	Pooled treated sectors	0.009087	+0.9%	0.85008	No meaningful divergence from aggregate exports
Treated sectors vs total exports	Second	Pooled treated sectors	-0.062470	-6.1%	0.03909	Moderate underperformance relative to aggregate exports
Sector vs total exports	First	Aluminum	0.182354	+20.0%	0.09374	Outperforms total exports in the first period
Sector vs total exports	First	Food	0.027197	+2.8%	0.54560	Broadly aligned with total exports
Sector vs total exports	First	Beverages	-0.049889	-4.9%	0.18710	Mild negative deviation
Sector vs total exports	First	Iron and steel	-0.071368	-6.9%	0.24791	Mild negative deviation

Sector vs total exports	Second	Machinery	-0.042861	-4.2%	0.19033	Mild negative deviation
Sector vs total exports	Second	Aluminum	-0.000827	-0.1%	0.99463	Fully aligned with total exports.
Sector vs total exports	Second	Food	-0.049180	-4.8%	0.40358	Mild negative deviation
Sector vs total exports	Second	Beverages	-0.090319	-8.6%	0.21614	Moderate negative deviation
Sector vs total exports	Second	Iron and steel	-0.133674	-12.5%	0.20692	Strongest negative deviation among treated sectors
Sector vs total exports	Second	Machinery	-0.038351	-3.8%	0.38850	Mild negative deviation
Pharma vs total exports	First	Pharmaceuticals	0.303612	+35.5%	0.000172	Strong outperformance relative to aggregate exports
Pharma vs total exports	Second	Pharmaceuticals	0.100834	+10.6%	0.075641	Moderate outperformance relative to aggregate exports

Table A2- Alternative Export Share Robustness Results

Additional diagnostic checks

Before estimating the baseline DiD models, the following tests were carried out to ensure the validity of the specification and the data. First, the balanced structure of the panel at the year–sector–firm level is verified. Each combination in the analysis has exactly twelve observations per year. This implies that the dataset is balanced at the level of the three-way combination used. Secondly, checks are performed for missing, infinite, or non-positive values in the transformed variables. No such observations were found for the `log_share`, `log_rel_quantity`, and `log_rel_price` variables. Thirdly, the fixed-effects structure is examined to identify any collinearity issues. In both baseline models, the next-period dummy variable is automatically dropped from the estimation procedure as it is perfectly collinear with the year dummies. This does not pose any problem for interpretation, as the coefficient of interest in the model is the product of the next-period dummy variable and the interaction term. Finally, as only one previous period is available for each specification, it is impossible to test the parallel trends hypothesis. Fourthly, residual tests were conducted on both reference models. It was found that, in certain specific observations relating to Italian sectors – particularly the aluminum and beverage sectors – significant residuals occur, indicating a certain degree of volatility; however, this does not constitute a general problem with the data. Fifthly, the model fit measures were examined. The benchmark model for 2016, compared with the 2017–2020 period, comprises 720 observations and has an RMSE of 0.584, an adjusted R^2 of 0.366, and an internal R^2 of 0.148. The reference model for 2024–2025 has 288 observations, with an RMSE of 0.531, an adjusted R^2 of 0.490, and an internal R^2 of 0.295. Sixthly, the error strategy was evaluated. The aggregate models feature standard errors based on sector-level clustering, whilst the bilateral sector-by-sector models feature standard errors robust to heteroscedasticity, as sector-level clustering would yield only two clusters. With only a single prior period included in the per-time window, the parallel trends assumption cannot be tested robustly. This is why the DiD results should be regarded as comparative indications of relative sectoral divergence rather than as causally valid findings.

Given that each DiD window includes only one pre-period year, a full multi-year parallel-trends test could not be implemented. However, lastly, a pre-treatment monthly trend check was conducted using the available monthly observations within the pre-period years. Specifically, the model tested whether treated sectors displayed a differential monthly trend

relative to pharmaceuticals in 2016 for the first specification and in 2024 for the recent specification. The coefficient on `treated: month_trend` is not statistically significant in either case: -0.003039 ($p = 0.70877$) for 2016 and 0.000479 ($p = 0.895645$) for 2024. This suggests that, within the available pre-period months, there is no evidence of a differential monthly trend between treated sectors and pharmaceuticals. Nevertheless, this check should be interpreted as a limited diagnostic rather than as a full validation of the parallel-trends assumption, since only one pre-treatment year is available in each time window.