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Hsiao, Hong-Cheng

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Hong-Cheng Hsiao

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Second Reader: Madeleine Hosli

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ABSTRACT

In 2019 the European Union labelled China as "*a partner, a competitor and a systematic rival*", however, since then the economic partnership between the European Union and China has evolved into a new era. Recent developments regarding the EU's FDI screening mechanism next to the frequent economic disputes with China highlights the art of balance for the leaders of the EU and member states. Weighing between the economic benefits and the protection of the Union's solidarity, this paper examines the interplay between the trade relations with China and the development of national FDI policy among EU member states. Implementing quantitative research via text analysis, the findings are proven as insignificant but consistent to the policy analysis, confirming several prominent issues affecting the tangled EU-China relationship.

Keywords: China; Trade Dependence; Investment; Policy Stringency; European Union; FDI Screening Mechanism; Foreign Direct Investment

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I. INTRODUCTION

1.1. Background

In the era of globalisation, international trade and foreign direct investment (hereafter FDI) are two important drivers of the global economy, promoting the cross-countries movement of goods, services, and capital flow around the world (Cernat, 2019). The relationship between international trade and FDI is commonly portrayed as complementary instead of competitive since they contribute to different types of cross-national flows among international economies (Fontagné, 1999, p.5; OECD, 2006; OECD, 2018). In addition, it is consensus that international trade and FDI are two major pillars, strongly related to the economic development of individual countries (OECD, 2018; Wiredu, Nketiah & Adjei, 2020; Ngundu & Ngepah, 2020). The former can drag the national actor into the circulation of the global value chain, which increases the economic interactions across states and stimulates the domestic competition in upgrading economic growth (Huang & Słomczyński, 2003; Echandi, Krajcovicova & Qiang, 2015; Cernat, 2019; Morgan, 2021; Ngundu et al., 2020; Yang, Xue, Shi, Shao & Wang, 2021; Hackenbroich, Medunic & Zerka, 2022); the latter can provide financial flow with the improvement of human capital development, the upgrade of political and social environment, the advance of financial system development, and the quality of economic (Baiashvili & Gattini, 2019, p.2; Ngundu et al., 2020; Yang et al., 2021).

The European Union (hereafter EU), as a cross-countries unity of the European economic community, has significantly engaged in the cross-border economic transactions of both flows (European Commission, 2021, p.6-9). As the result of tangled development in globalisation, the amounts of international trade and FDI in the EU have steadily increased through the contribution from traditional trade partners such as the United States (hereafter the U.S.) and Japan over years (European Commission, 2021, p.7-8). Nevertheless, brought into the global economic system in 2001 with the booming economic growth afterward, China has arisen as one of the EU's top trade and investment partners (European Commission, 2019; Ibid, 2021). Notably expanded in the past twenty years, China has been ranked as the third biggest foreign investor regarding the inward FDI in the Union (European Commission, 2021). Regarding the trade ties, the EU and the member states collectively and individually share stronger ties with China in international trade, in which China overtakes the U.S. as the EU's biggest trade partner in goods in 2020 (BBC, 2021).

However, the trade and investment relationship with China has welcomed several frictions, where the EU has realistically shifted to a more assertive manner (European Commission, 2019). The EU has realistically shifted to a more assertive manner, marking China as a comprehensive strategic partner. The move responds to the concerns in the debate of prioritising economic benefit or the EU core values, surrounding the issues regarding Chinese core interests such as Uyghurs, Taiwan, and human rights (Moens and Leali, 2022; Stec, 2022). Due to the tight involvement in both sides' economic growth, a sudden change unilaterally could shake the trust and foundation, as well as expose the tension out of an imbalance of interconnection (Hackenbroich et al., 2022). Although the EU functions its external trade and economic relation with China under the common united trade policy, the individual economic relations among member states and China still differentiate with diverse magnitudes across several sectors and industries (Bondarouk, 2019, p.11). Therefore, on one hand, the impact of trade dependence characterises the hosting EU member state's behaviour, when multiple trade quarrels between the EU countries and China outbreaks (Hackenbroich, 2022); on the other hand, in line with the problem of the controversial investments posed by China's Belt and Road Initiative (hereafter BRI) projects, the awareness of regulating foreign investment against potential risky finances from third countries within the EU have drawn much attention in the institution in the near past years (Sacks, 2021; European Commission, 2022). Thus, the EU's response to the challenges would establish the crucial principle in the maintenance of trade and investment resilience and solidarity in the common economic framework within the individual member states and the Union (European Commission, 2020).

In addition, empirical practices in the international political arena show that the economic relation with China seems to become a decisive element for global actors whether assertively or passively expressing positions and even switching sides towards global issues concerning China-involved affairs (MERICS, 2020). The tendency to stay less vocal against Chinese has not just been perceived among developing countries that have been receiving the benefits in the domestic ecosystem from the Chinese trade and investment collaboration, but also among the EU countries which seek to strengthen the cooperation with China (Chang & Pieke, 2018; Fong & Sakib, 2021). However, the economic gains usually do not come without the effort input from host countries. Policy and regulations are required to be designed and constructed in favour of accommodating more foreign investments (Echandi et al., 2015). Rules such as institutional legal restrictions, examination of investment, reporting and supervision mechanisms, and the percentage of foreign stakeholders need to be adequately formulated in

the process (Xueref-Poviac, 2021). Certainly, the construction of these regulations could be diverse either in a strict and tight or soft and unrestrained tone (Echandi et al., 2015; Xueref-Poviac, 2021). The timing in formulating the policy and the capability of bureaucracy in processing the challenges in law also reflects the degree of a country values its national investment policy in coping with the foreign investor (Xueref-Poviac, 2021).

With the increasing amount of FDI flowing into the Union, the EU Commission constructed the framework of the FDI screening mechanism in 2019, ensuring the collective security of member states and the Commission as well as the security of the single market and high levels of economic integration (European Commission, 2020). Although the Commission explicitly addressed one of the core requirements for the member states' national screening mechanism as 'non-discrimination among foreign investors, it cannot be neglected that the construction of the FDI investment framework aims to secure the EU from the questionable investor such as Russia and China (European Commission, 2020; MERICS, 2020; Huotari, Weidenfeld & Wessling, 2020; Stec, 2022). On one hand, the EU's trade and investment relationship with Russia (particularly the deep involvement between Russia and Germany) has notably stimulated the huge attention and concerns in Brussels since the Russia-Ukraine conflict outbreak in 2022 (European Commission, 2022; Eurostat, 2022; Simon, 2022). On the other hand, the Chinese investment arouses the notice of the EU since the financial flow is reached through those enterprises which strongly connect to state-affiliated businesses (Bickenbach & Liu, 2018, p.16; Knoerich & Miedtank, 2018, p.4). The deep root of the authoritarian regime behind these enterprises provokes the EU's awareness in seeking to strengthen economic security and preserve strategic autonomy while cooperating with China (Huotari et al., 2020). Furthermore, these state-affiliated businesses have mainly targeted critical infrastructure industries and businesses related to intellectual property, which potentially jeopardises the EU's interests (van der Putten, 2017, p.4; Knoerich et al., 2018, p.3-4; Hanemann et al., 2018, p.21-23; Stec, 2022). Therefore, the EU published the FDI screening mechanisms to examine and regulate the foreign investment within the Union in 2019.

Under the framework of the FDI screening mechanism, the nature of the EU-level regulation provides the member states with flexible autonomy in framing and phrasing their own national FDI screening mechanism (Hauser, 2017; European Commission, 2021; Xueref-Poviac, 2021). The autonomy allows the member states to amend the FDI screening framework regarding the speed of adapting the mechanism and the harsh or soft manner in phrasing the foreign

investment regulation according to the starcraft circumstances (European Commission, 2021). Yet, the Commission indeed offers a set of minimum key requirements for members and eagerly calls upon the set up of the national-level mechanism from the Russian influence currently (European Commission, 2021; Ibid, 2022). Given that the trade relations with China of each EU country vary in different schedules and notions among members, an exploration deserves to be conducted: how the individual EU member states balance the trade relation with China linking to the potential economic benefit from Chinese investment flow in line with the EU's FDI screening strategy, guarding the community's public order and security from external threats.

The core question has been left for an investigation and highlights the sense of this study. Thus, the thesis will use text analysis through Dictionary method in measuring the stringency of legal language concerning the FDI screening mechanism among the EU countries. Subsequently, the self-designed formulas of trade dependence index and investment dependence index are introduced as the demonstration in measuring the intensity of individual trade relations with China. And finally, statistical exploration might draw the relations between the trade dependency on China of the EU members, the speed in adapting the EU's FDI screening framework, and the stringency/ strictness of legal terms in the national FDI screening mechanisms.

1.2. Research Aim, Originality, and Specific Objectives

The research project proposes the following research question:

R.Q.: How have trade relations with China affected the European Union countries' adaptation of their national investment screening mechanism?

This research aims to explore how the trade relation between China and individual EU member state affects the speed of and the phrasing in adapting the national investment screening mechanisms in EU countries. The study will focus on the scale of the European Union and its member states since the special nature of the regional integration significantly values the autonomy of members in implementing the common union policy to the national regulation (European Commission, 2020). The research will design two indicators, reflecting the rate of trade dependence and investment dependence on China. Additionally, different from most studies using text analysis to evaluate the sentiment of policy or public speech, the study seeks

to capture the stringency of the legal document, mirroring the intensity of adapting the FDI screening policy. Moreover, the novelty of the research relates to the fresh and up-to-date establishment of FDI screening issues, either at the EU- or the state-level alongside the imperative circumstances towards the statecraft-led investments from totalitarian authorities. As a result, the attitude of democratic countries and their pace of implementation affirms the importance.

The cross-sectional combination of different types of literature including economics, finances, international relations, regulations and law, implementation study, and public policy highlights the originality and the inventiveness of this research. Furthermore, the existing academic literature and policy paper by think tanks confirms the correlation majorly through qualitative research, while this research aims to quantify to what degree bilateral trade quantity would affect the domestic policy under the guidance of a hierarchical actor (van der Putten, 2017; Bickenbach et al., 2018; MERICS, 2020; Xueref-Poviac, 2021).

The positivist approach adheres to the research since I rely on computable and objective statistics, which are collected from several quantitative databases. The research question will inspect the casual relationship among variables through the element of deduction. The deductive process will firstly compose hypotheses after looking through the literature, subsequently, I will examine the assumption whether the result at the end is valid in support of the hypotheses.

1.3. Academic and Societal Relevance

The significance of the research question consists of both societal and academic relevance. The research question's societal relevance lies in the national security concerns, public order maintenance, and the influence on the EU countries, next to trade and investment relations with China (European Commission, 2021). In line with China's 'go global policy' and the trade tensions recently (Gallagher & Irwin, 2014), the EU's attitude towards China has shifted to not just a cooperation and negotiation partner, but also an economic competitor and a systemic rival (European Commission, 2019; Ibid, 2020). However, the gap in societal understanding regarding the third country's economic influence on the EU and member states' national legal schemes still needs to be further inserted. It is highly important to examine to what extent China's economic diplomacy affects the EU member states' notions, in terms of the implementation of the national legal framework, connecting to scrutinising the major trade and investment partners (Chang et al., 2018). Additionally, the academic relevance will be introduced in the next chapter next to the research gap.

For academic relevance and research gap, firstly, previous research has massively illustrated the complex relationship between international trade and FDI and the dynamics of how economic relations influence the foreign policy, but the process and development of framing the national and legal-oriented policy (Richardon & Kegley, 1980). Secondly, the factors that account for the differences across countries need to be further explored to portray the correlations and casualties, considering that each EU member state acquires flexibility in converting regulations to the national situation and implementing them nationally (European Commission, 2021). In addition, existing studies also less comprehensively addressed the characteristics of the observing countries, the dynamics of the country's economic size in the bilateral relationship, and the effect of trade and investment on policy framing (Baiashvili et al., 2019; Wiredu et al., 2020; Xueref-Poviac, 2021). Thirdly, the soundness of the research is expected to analyse multi-linguistic and multi-national legal frameworks through data extraction, which has not been widely used in the study of the implementation of European policy.

*** Thesis Structure ***

Thus, having highlighted the topic and portrayed the gravity and originality of the study, the thesis will be constructed in the order below: Chapter 2 will review the existing related literature regarding trade and investment relation, the effect of dependence on the host country's policy, the discussion on Chinese trade dependence on hosting countries. Subsequently, Chapter 3 will explain the theoretical framework and present the hypotheses of this study. Accordingly, Chapter 4 will demonstrate the research design, sample choice, and the method of data analysis. Chapter 5 will display the analysis of preliminary data and the outcomes from the OLS (Ordinary Least Squares) regressions. Lastly, Chapter 6 will explain the main findings with the limitations in the study, offer suggestions for future research, and conclude the research.

II.   LITERATURE REVIEW

This section discusses existing literature on the topic of the dynamic between trade relations and investment policy framework. Firstly, a brief introduction on the role of trade and investment in the international economy is presented. Subsequently, the second section seeks to capture how trade relations and economic dependence such as trade and investment dependence influence the hosting country's policy. Thirdly, it discusses how the trade dependence on China favours Beijing and threatens the EU and the member states. At last, the implementation study on EU policy and the process of stringency policy will be highlighted. Based on the literature review, the literature gap that this research project seeks to address is identified.

2.1. Trade and Investment Relations in Global Economy

Empirical study after the mid-1980s shows that foreign investment heavily influences cross-national trade flows, which reverses the traditional understanding that trade affects investment from abroad instead (Fontagné, 1999, p.5). The evidence consistently demonstrates that short-term and long-term foreign investment have respectively impacted the increasing amount of imports and exports in the hosting state (Richardson et al., 1980, p.218-219; Fontagné, 1999, p.5; Huang and Slomczynski, 2003, p.96; Houanye & Shen, 2012; Ngundu & Ngepah, 2020). Particularly, the developing countries benefit from a more advanced production of goods and services by hosting FDI, with the upgrade of productivity and improvement (Baiashvili et al., 2019; Wiredu et al., 2020). As a result, FDI can be delivered as an economic vehicle for the hosting state to better transform its domestic production and further integrate into the global value chains (Echandi et al., 2015, p.3; Ngundu et al., 2020). The consideration of engaging the domestic trade environment in international trade motivates the hosting country to adjust and upgrade its institutional characteristics for attracting foreign investors (Echandi et al., 2015, p.3; Yang et al., 2021). To ensure the continued prosperity from the economic flow provided by the partner, the investment policies of the hosting country are expanded and amended by the application of the regulation in favour of the foreign investor and in accommodating the gains brought by foreign investment (Echandi et al., 2015, p.3-4; OECD, 2018, p.1). When the trade and investment flow stably rush from the foreign economic power to the hosting developing country, the vigorous interaction not only forms a closed economic relationship but also creates a certain level of economic dependence on the source country (Beck, 2003; Yang et al., 2021; Hackenbroich et al., 2022).

2.2. The Influence of a Country's Trade and Foreign Policy by Trade and Investment Dependence

To attract FDI flowing into the receiving countries, the investment policy tends to be designed to lure and expand the potential benefits from the FDI, including investment promotion, extensive implementation of tax design, and financial incentives (Echandi et al., 2015, p.11). Certainly, empirical studies have found that the location and characteristics of hosting countries matters for foreign investors (Buethe and Milner, 2008; Chang, 2014, p.260; van der Putten, 2017, p.10). Most of the literature also examined a positive relationship that trade in services and liberalisation of services can significantly help the attraction and inhabitance of FDI (Houanye et al., 2012; Echandi et al., 2015, p.18). In addition, a country's commitment to liberal economic policy is expected to create a more credible channel to attract inward FDI flow (Buethe et al., 2008, p.759). If a country with fewer limitations in its capital markets, that would provide the host industries with higher opportunities for external investment flows than a country with a conservative policy (Beck, 2003, p.20; Echandi et al., 2015, p.4). Subsequently, a stable and long-term financial roll flowing from an investing country to the hosting country will stimulate a lasting trend of economic growth, which forms an orientation of reliance (Buethe et al., 2008; Cernat, 2019). Hence, the investment dependence will deeply secure the international finance tie and continuously shape the liberal-oriented investment policy of the hosting state (Houanye et al., 2012; Echandi et al., 2015; OECD, 2018).

Previous literature concerning the effect of trade and investment dependence on the hosting economy's policy shows a positive correlation. The relationship between trade vulnerability and foreign policy compliance is noticeably perceived with a positive correlation in shaping a single state's international policy (Richardson et al., 1980, p.219; Aremu, 2010). Several studies explain how the economic dependence on the U.S. has led to European countries and Central and Southern American states forming their policy in favour of Washington's interests (Fontagné, 1999; Kim, 2013; Flemes & Wehner, 2015). Furthermore, previous researchers' findings (Kim, 2013; Lektzian and Biglaiser, 2014; Barry and Kleinberg, 2015; Mirkina, 2018) draw the positive effect of outbound FDI on sanction success by the U.S. Nonetheless, the significant effect of the U.S. case lasted in the short term for a sustained trading relation (Lektzian et al., 2014; Mirkina, 2018). Therefore, the research could further study the long-term effect of trade dependence.

2.3. The Influence of a Country's Trade and Foreign Policy by Trade and Investment Dependence on China

The trend was believed to fade alongside the cooldown of ideological confrontation where the great power had decreased the implementations of the tool that translates asymmetric trade leverage into political payoff (Richardson et al., 1980, p.219). Yet, the geoeconomie has arisen as an economic vehicle for Beijing, pursuing a pro-China base in the international arena and projecting its power to the individual state (Schneider-Petsinger, 2016; MERICS, 2020; Stec, 2022). Next to the strong trade and investment relations, since globalisation encourages more cross-national interaction, the strategy of creating a friendly-to-China environment costs economic dependence accumulated from the closed tie in trade and investment (Echandi et al., 2018, p.2; Hackenbroich, 2022). The economic tools are composed of the demonstration of state capitalism and state-owned enterprises (Bickenbach et al., 2018, p.16; Knoerich et al., 2018, p.4). The execution of state-oriented economic behaviour decreases the autonomy of business activity in the presence of statecraft-led interference; at the same time, the tangled interaction of international trade even strengthens the power of geoeconomic tools (Schneider-Petsinger, 2016).

2.3.1. The China Factor in the Southeastern Asia Countries' Trade and Foreign Policy

Empirical study shows that the Chinese geoeconomic power plays an important role in both the domestic and international policy of Asian countries (Das, 2017; Yang et al., 2021; Marukawa, 2021). Southeastern Asian states with high levels of economic dependency on China, tend to frame their domestic policy in a manner of the status quo maintenance regarding trade policy with China, which shapes a less dare-to-challenge and flexible attitude in the domestic politics (Zha, 2015, p.260; Das, 2017). In contrast, the situation of low economic dependence on China unleashes the southeastern Asian states from potential Chinese influence dwelling in the domestic political system to construct their national policy (Zha, 2015, p.260). Moreover, due to the Chinese BRI projects, Southerneastern Asian countries profit from the upgrade of infrastructure financing and the economic growth through the trade ties with China (Yan & Enderwick, 2019, p.143). The economic dependence on China has even become a decisive element in the Philippines' domestic politics, swinging between receiving the economic benefit of long-lasting Chinese finance or defending its territorial sovereignty on the

maritime claim in the South-China Sea (Das, 2017, p.3). Furthermore, the trade dependence of Southeastern Asian states on China is also weaponised in affecting the ASEAN politics. Aiming for swiping off the security facilitation of the U.S. in East Asia by pressuring on small states, China also use its strong economic position in blocking the unfavour policy decision in ASEAN's full consensus decision-making system[1] (Tran, 2021). The circumstances of Southeastern Asia come from the trade deficit with China and Chinese outbound investment, providing Beijing with the leverage in dominating the relation at their disposal (Das, 2017, p.3). It also marks that the capability and the influence of trade dependence on China can not only influence the domestic politics of individual countries but also weaken the solidarity and efficiency of regional integration.

2.3.2. The China Factor in the European and EU Countries' Trade and Foreign Policy

Certainly, compared to ASEAN, the EU enjoys a well-founded common policy, well-designed rules, and well-distinguished institutional bodies with a long history of integrating its member states with consistent regulations towards internal and external actors. Nonetheless, the empirical and current trade tension nowadays reveals the potential threat of the trade dependency on China posed to the EU and the member states. Particularly China has encouraged the participation of BRI projects since 2013, the challenges have been perceived with the financial problems to the partnered nations in the absence of the economic cooperation and lack of fulfilment of investment promises (Chang et al., 2018; Ramasamy & Yeung, 2020; Brinza, 2020). Moreover, The disputes concerning Chinese economic diplomacy in Europe have proven a certain level of effectiveness of Beijing's strategy works in shaking the Union, while the Commission lays out a new strategy taking China as "*a partner, a competitor and a systematic rival*" (European Commission, 2019).

China has a long record of implementing economic coercion to punish the countries with which it had quarrels by acquiring pro-China manners from European countries (Oertel, 2022). Beijing unilaterally limited the import of salmon from Oslo in 2011, after the Norwegian Nobel Committee awarded Chinese dissident Liu Xiaobo the Peace prize (Holter and Moskwa, 2011). In addition, The Czech Republic also received a unilateral cancellation of imports and exports

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[1] In 2012, China used Cambodia to block a foreign ministers' statement among ASEAN states that was seen to oppose Beijing's claims in the South China Sea (BBC, 2012).

curbing by the Chinese business with official support as a response to the non-official positive relationship between the Czech and Taiwanese in 2020 (Allen-Ebrahimian, 2020).

Moreover, the trade tension between China, Lithuania, and the EU has reached the most intense moment in the relationship from 2021 onwards, since Lithuania actively seeks to strengthen its ties with Taiwan. The dispute existing in this economic diplomacy case expands from curbing the goods imports and exports from Lithuania, pressuring international companies to cut off the ties with Lithuanian suppliers to the WTO trade dispute (Ng et al., 2021; Sytas and O'Donnell, 2022; WTO, 2022). The request to the Lithuanian government de-escalating the dispute with China was brought up by some German companies affected by the Lithuania-China trade tension with the claim of withdrawing the corporates and factories from Lithuania (Sytas et al., 2022). The incident marks how European enterprises sharing strong business links with China unintentionally fall into the scale of business proxy agents for China since the deep involvement of cross-countries actors in the global value chain (Hackenbroich et al., 2022; Sytas et al., 2022). Similar to economic sanctions, the phenomenon portrays the involving countries' political dilemma between gaining economic benefits from the dependence on China and aligning with the EU values (Whitten, Dai, Fan, Pang, 2020, p.15).

In terms of presenting the EU's attitude toward the investment relation with China, Brennan and Vecchi's research (2021, p.1080) distinguishes three phases of the EU's perception of the investment relation with China in the past twenty years. The positive environment in Brussels has transformed from the phase in the 2000s with openly welcoming capital flow and the subsequent mark in the post-euro-zone crisis of imperatively financial and economic partnership (Yılmaz, 2020, p.3; Oertel, 2020, p.13; Brennan et al., 2021, p.1080). The presence of Chinese finance flows in the EU illustrated as 'China Anxiety' has stimulated the strategy of rethinking the dynamics, while the divergence between the trade and economic partners has shown up since the eighteenth EU-China summit in 2016 (European Commission, 2016; Ibid, 2019).

Furthermore, Chinese investment seems to become a dominant factor to establish the narrative and assertiveness of individual countries' foreign policy in the international arena, particularly those countries that benefit from Chinese financial assistance. The finance investment from China has earned China the support and the prestige in developing countries including Africa, South America, and the EU member states (Ngundu et al., 2020; Morgan, 2021). Strikingly, the financial support from China to the EU countries has gradually cost the Union's effort in

solidarity and become a problematic issue for the EU in dividing the unification and solidarity in the Union (Bickenbach et al., 2018; Knoerichet et al., 2018; Chalmers and Emmott, 2021). Chinese economic diplomacy has been rooted in shaking the EU's common values (Meunier, 2018). In the past, Hungary and Greece have severally acted reluctantly in supporting the EU's statement and economic action through a stronger and assertive tone towards China-related issues (Bickenbach et al., 2018, p.16; Chang et al., 2018, p.326)

Hungary has been severally reluctant in proactively supporting the EU's foreign policy with the lean of a pro-China attitude[2]. The position is relevant to the fact that the multiple Chinese investment projects have been hosted by Hungary as one of the largest recipients including Huawei's oversea supply hub, smart railway cooperation with the Chinese tech giant, and Chinese University's oversea campus in Budapest (Koleszar, 2021). Greece, one of the biggest recipients of Chinese investment, is also demonstrated its unwillingness with the assertive voice against China[3]. 67% stake of Greece's largest port is under the control of the Chinese state-owned COSCO Shipping. The deal was rapidly approved by the Greek government in 2010 in the seek of getting rid of its debt-ridden economy after the 2008 eurozone crisis (Smith, 2010). In addition, Greece also profited from the booming tourism growth due to Chinese tourists increasing which also accounts for a major proportion of the Greek economy after 2008 (Skivalou & Filippidi, 2017, p.326). Both cases show that the GDP growth-oriented concern indeed shapes a country's policy under the international economic flow. The phenomenon has notably highlighted that the consideration of trade and investment benefits and dependence under Chinese influence is currently shaking the EU and member states' policy and attitude when confronting China-related issues.

According to the empirical evidence aforementioned, the EU countries gain economic benefits from the trade and investment ties with China. In contrast, what China seeks in Europe through inward FDI in the EU are including technology techniques, access to the European market, and political/ diplomatic influence (Seaman, Huotari & Otero-lglesias, 2017, p.10; Ramasamy et al., 2020). Aiming for critical assets and infrastructure, Chinese enterprises gradually penetrate

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[2] In 2017, Hungary avoided its name from being added in a European Union joint letter, voicing the concerns about reports of lawyers in China being tortured in detention (Denyer, 2017); In 2021, Hungary blocked the EU statement criticising China's new security law and the human right situation in Hong Kong with Budapest's argument claiming that the EU should not pick up another issue with China (Chalmers et al., 2021).
[3] Greece blocked the EU statement at the United Nations criticising China's human rights record in 2017, and stopped the EU addressing a statement against Chinese disputed behaviour in the South China Sea in 2016 (Denyer, 2017; Horowitz and Alderman, 2017).

the European markets by conducting merging and acquisition strategies in acquiring the European business (Seaman et al., 2017, p.11; van der Putten, 2017, p.99; Bickenbach et al., 2018; Knoerichet et al., 2018). Before the framework of FDI screening mechanisms issued by the Commission in 2019, Europe has developed an increasing realisation that risks related to foreign states' control of strategic assets need to be mitigated through thorough screening regulation for securing the national and European common property (Seaman at al., 2017, p.12; Cernat, 2019; European Commission, 2020; MERICS, 2020)

In the past few years, the EU-China trade and investment relations have achieved several milestones which highlight Brussels's determination in establishing a more advanced and assertive strategy with the trade partner through active governance. Particularly addressing the investment relation, the EU has principally reached the Comprehensive Investment Agreement with China and constructed the EU-level strategy requesting the member states to construct their national FDI screening mechanisms (European Commission, 2020). Indeed, the FDI screening mechanism does not merely aim to regulate the Chinese investor. The promotion from the Commission to complete the set-up of the FDI screening mechanism has significantly highlighted the concern of Russia's interference (European Commission, 2022). The behaviour seeks to mitigate the influence of economic dependence on Russia since the Euro Crisis has lastingly constrained member states and uncovered the problem of the absence of a *collective* reconciliation of the internal and external interests among member states (Kundnani, 2016, p.7-8). Therefore, the Union becomes less resilient and flexible in facing the challenges from foreign actors when a member state develops a tangled financial relationship with the possibility of jeopardising the Union's wholesome interests (Kundnani, 2016, p.7; Ramasamy et al., 2020). As aforementioned, the post-euro crisis led Greece to build a strong economic connection with Russia and China (Smith, 2010). The economic ties with EU members may jeopardise the EU's interests with the effect of the EU's sanction on Russia and decrease the completeness of the FDI screening policy in examining the source of Chinese funds (Kundnani, 2016, p.7).

2.4. The EU Policy Implementation

Described as the process of transposition, the nature of the EU allows the member states to structure the domestic policy, ensuring the functioning of the EU common rules among members (European Commission 2020). Earlier studies on the EU policy implementation also

marked the gap in the tendency of the generalisation of the definition of policy objectives during the implementation process (Toshkov, 2010). In the evaluation of EU policy implementation performance, more attention should be delivered to portray the time when the policy applies and the goal to be prioritised (Bondarouk and Mastenbroek, 2018, p.19-20). In terms of measuring stringency policy, previous researchers also point out the absence of unified stringency measurement indicators with varied definitions of policy stringency (Brunel & Levinson, 2013, p.2-3; Sauter, 2014). Hence, the current research gap is highlighted as to how the trade and investment dependence could affect the reporting country's policy next to measuring policy stringency.

Overall, the current mainstream academic research majorly focuses on the qualitative causal correlation research between the economic dependency on a certain country and the influence of the dependence on the hosting country's foreign policy. Previous research addresses that the casualties and factors need to be further focused in the context of individual countries bridging the trading effects to investment policy by including the institutional characteristics (Fontagné, 1999, p.6).

III.   THEORETICAL FRAMEWORK

The main concept in the research derives from the previous paragraph, a country that succeeded in its foreign trade with higher openness will attract more foreign investment and boost further international trade and other economic behaviours for economic growth (Huang et al., 2003,

p.96). Actively engaging in more international trade flows will strengthen a country's trade relations with other international actors. However, as aforementioned in the literature regarding economic dependence, a country may fall into the circumstances of trade and/ or investment dependency on partner countries who unilaterally dominate the relationships in commerce and finance (Yang et al., 2021, p.4). The interaction has commonly trapped developing countries into a continuous situation of economic reliance (Huang et al., 2003; Echandi et al., 2015; Baiashvili et al., 2019; Nketiah et al., 2020).

Therefore, this thesis is inspired by merging several aforementioned conceptual frameworks from many previous studies and global issues. The framework aims to explore the phenomenon of whether the trade relation with China would affect the adaptation of an individual country's national FDI screening mechanism and regulations among the EU member states. That is, by 'affect' means 'do stronger trade relationships with China make the country more willing to accept FDI'.

Within the EU, the economic power diversifies each EU country's trade relations with external trade partners though the majority are also the member states of OECD. Particularly, the Central and Eastern EU member states have been seen to bear a less perceptive and tactful attitude towards foreign investment (Petkova, 2020). Prior to that the EU assigned the construction of national FDI screening mechanisms in the member states, merely five of eleven Central and Eastern European Union Countries[4], Hungary, Latvia, Lithuania, Poland, and Romania, have included screening mechanisms in their national legal framework. While governing Chinese foreign investments, particularly towards the Chinese state-affiliated inward FDI in the Union, the EU has yearly recorded a vertically rising amount of hosting inward Chinese investments in recent years, which keeps the tones of investment deficit compared to the EU investment in China (European Commission, 2021; Kratz, Zenglein & Sebastian, 2021).

Thus, since the trade relations with China are likely to be a significantly decisive factor in the timing of adaptation and the degree of stringency of national FDI screening frameworks in the EU member states, two levels of the research question require the investigation of two research sub-questions: '*How has the trade dependency on China affected the speed of adaptation of*

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[4] Central and Eastern European Countries (CEECs) is for the group of countries comprising Albania, Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, the Slovak Republic, Slovenia, and the three Baltic States: Estonia, Latvia and Lithuania (OECD, 2001), while Albania is not an EU member.

EU member states' foreign direct investment screening mechanism?' and *'To what degree does the trade dependency on China of each EU member state affect the stringency of the legal language in their national foreign direct investment screening mechanism?'*.

In response to these two research sub-questions, two cost-benefit analysis hypotheses have been respectively framed as

H1.1. *'The higher the trade dependency an EU member state has on China, the slower an EU member state has adapted their national foreign direct investment screening mechanism.',*

and

H1.2. *'The higher the trade dependency an EU member state has on China, the less often stringent language is used in their national foreign direct investment screening mechanism.'*

The H1.1. hypothesis aims to illustrate how quickly national foreign direct investment screening mechanisms are adapted. The H1.2. could be unfolded as an EU member state is hypothesised to be less likely to have one or stricter regulation on limiting the entry of Chinese foreign investment, because of the fruitful benefits from the positive trade influence and dependency on China. Therefore, the EU member state may keep the policy more open and free and frame the regulation more lenient and amiable.

Moreover, the thesis employs the theoretical concept of 'Cost-Benefit analysis', which addressed 'the prediction of the value in the expected utility of choosing the "*Policy A*" efficiently deliberates against that of the value in the expected utility of choosing the "*Policy B*" (Downs, 1957, p.138)'. According to the literature, the practice of Cost-Benefit analysis secures the allocation of resources generated by the governmental system under the commercial spheres (Wildavsky, 1966, p.293). The decision-makers in deciding the allocation of property rights define the valuation of resources (Economic and Political Weekly, 2001, p.1825). Apart from the perspectives of policy-makers, the level of capital market restriction also matters (Beck, 2003, p.19-20). The decision-maker is expected to be rationalistic.

The assumption is that the rational actor is expected to do a rationalistic calculation of cost-benefit analysis choosing among policies. Countries who do not want to jeopardise the good relation with China because they are dependent on trade, while the identity of being an EU member requires the countries to ally with the EU and the common policy. The resources

represent the stage of adaptation and the stringency of legal language in implementing the national FDI screening mechanism for the EU member states. The benefits among choosing policy A or policy B could respectively be illustrated as stabilising and deepening the trade relations with China or aligning with the EU common values and securing the investment markets from potential controversial investors. Profited from the stable trade relation securing the economic growth in the past, designing a lower level of national FDI screening mechanism might decrease the barrier for foreign investment rooting in the hosting country and increase trading relations (Huang et al., 2003, p.96). The straightforwardly accessible regulation for foreign investors could also contribute to the advantages in welcoming more investment projects while competing for foreign investment resources (Echandi et al. 2015). Therefore, the theoretical idea of this thesis is underlying the calculation of weighing 'Cost-Benefit', contributing to the individual EU member state's behaviour between maintaining the trade relation with China and abiding the EU common market rules.

IV.   METHODOLOGY

4.1. Research Design

The hypothesis of this research study will be examined through empirical dictionary-based text analysis and the single and multiple OLS regression models. The text analysis through Dictionary method is expected to calculate the number of words in the dictionary and capture the frequency in measuring the degree of which each word is weighed. Subsequently, the threat to internal validity could be identified as the barriers and difficulties in interpreting the legal terms in the legal environment of each member state and translating the words in dictionaries from English to other EU member states' official language. As a result, the selection of translation tools will be focused on the translation of legal documents to minimise the gap. The other internal validity might result from the gap concerning from using the enterprise-perspective dictionary by Georgia State University to the national-perspective policy through dictionary analysis. Additionally, the threat to reliability might occur in the implementation of several datasets, but the problem will be mitigated by conducting values in the same database.

4.1.1. Definition

In line with the design of hypotheses, the trade relationship is introduced via the illustration of trade dependence. International economic research in quantitative methods has often used international trade dependence as an indicator of trade relations (Huang et al., 2003, p.93). On one hand, due to the nature of data-driven research with different interests, I chose to implement a self-designed trade dependence rate in measuring the EU member states' trade dependency on China as a symbol to reflect the degree of each EU country's trade relation with China; on the other hand, individual EU country's FDI screening mechanism is introduced as two levels of observations: the stages of the adaptation of their national FDI screening mechanism and the stringency of the legal language in their national FDI screening mechanism. The adoption of the FDI screening mechanism highlights the element of timing as a sign of how fast each member state echoes the EU Commission's FDI policy into their national FDI screening framework.

In terms of defining stringency, this research defines stringency via adopting the sentimental analysis study by Tucker, Xia, and Smelcer (2021) which I found shared similarities based on the alike nature of observations and the research goal. The reason is explained below why the study did not define stringency on its own instead.

The nature of policy stringency research contributes to the low science-oriented ground in defining stringentness since the measure of stringency is often related to perception (Brunel et

al., 2013, p.2). Previous researches vary the definition of stringency via different research methods to capture the perception, however, the perception commonly attracts the concern of being affected by subjectivity (Brunel et al., 2013, p.20-21; Sauter, 2014, p.2-4). Therefore, limited by the time and the length of this study next to mitigating the subjectivity of biassed perception on defining stringency, the study decides to define stringency by using the collection of words from Tucker et al. 's research with a slight adaptation.

The first similarity is that the observations in both studies are legal regulations. While the research is expected to portray the national investment regulation, Tucker et al.'s research originally aimed to study corporate-related regulations in practices, compliance, and performance (GSU Mutual Fund Research, n.d.). Subsequently, the second similarity exists in the choice of research methods, since both pieces of research focus on investment and finance orientation in implementing the text analysis. Policy stringency research commonly focuses on the correlation between whether the specific regulations affect the volume of investment and the pattern of international trade (Brunel et al., 2013, p.2; Sauter, 2014, p.1). Tucker et al. 's research seek to conduct the text analysis through disclosures of investment objectives, costs, fees, investment strategies, principal risks, and financial management (GSU Mutual Fund Research, n.d.).

Thirdly, sentimental analysis and policy stringency research are both concerned with perception based on the interpretation within the text. Further research also implements the GSU dictionary to analyse sentiment on political and public issues (Tucker et al., 2021), which justifies the potential to adapt the existing dictionary into the research. Therefore, based on the relevant elements such as the investment, finance, risk and management, and political-oriented issues, the adaptation is believed to be solid to include the words from Tucker et al. 's research in the study as the definition of stringency. To better fit the research interests, I further design the measurements respectively through the numbers, the stringency score, and the percentage of stringent words in the legal documents.

4.1.2. Limitation

In addition, limitations also exist when conducting text analysis, which merely focuses on the number of features captured within the terms used in the legal documents. However, the

analysis in the legal framework of investment could not reflect the differentiation and changes in regulating the percentage of investment, stakeholders, and implementation time across time. For example, text analysis could not reflect the change when EU countries tightened their foreign investment rules (Xueref-Poviac, 2021, p.3-4)[5].

The limitation of the study exists in the small sample size of 27 cases, which may not clearly draw the correlation of the findings and bridge the correlation among variables. Additionally, several researchers (Carril-Caccia and Pavlova, 2018; MERICS, 2020) have stated that the EU-level investment screening mechanism has related to the trend of Chinese FDI in the EU, though it seems that the exclusion of other significant trade partners affecting the mechanism might jeopardise the validity of the research.

4.2. Case Selection

The selection of observations on the EU member states allows the study to separately analyse the effect of trade dependence on individual countries. The nature of EU and member states regarding trade exists in the commons in the trend of high trade volume with China but differentiate in the degree of trade dependency on China (European Commission, 2021). Moreover, the implementation studies reveal that most EU member states are following the broad level of common economic policy under the framework of the Union and being subjected to the regulations about the FDI screening mechanism (Ibid, 2020). With a steady and solid development in regulations and institutionalisation, it also deserves a detailed exploration of to what extent the developed country would develop a different strategy in response to the investment policy and individual trade relations under the common union framework. Hence, the EU is a good case selection in benefiting the research aim.

As aforementioned, many studies have been concerned with how trade relations impact foreign policy and how trade relations have been transferred to the test stone to attract investment in developing countries. These studies have proven the positive trade relation with China successfully resulting in the positive economic influence of the receiving countries' infrastructure, foreign policy, and even global strategy in the international arena (Nketiah et al., 2020; Ngundu et al., 2020; Ramasamy et al., 2020; Morgan, 2021). In addition, the majority

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[5] As part of its tightening on foreign investment rules in France, the French Ministry of Economy further announced that the lowering of the threshold for the acquisition by non-European investors, of the voting rights of a listed French entity from 25% to 10% (which was initially set to expire on 31 December 2020 and then on 31 December 2021) is now extended and applicable until 31 December 2022 (Nataf, 2021).

of Chinese outward FDI flows in the developing countries such as Africa, Central, and Southern America, and South-eastern Asia, where previous studies have greatly uncovered how the trade and investment relations impact the trade dependence and changing characteristics in response to the implementation of Chinese investment (Yan et al., 2021; Yang et al., 2021, p.20; Tran, 2021; Ikechi, Chinedum & Nwokoro, 2022). However, neither the impact on individual countries and their regulations regarding economic and investment policy by trade relations nor the impact of Chinese investment on the regulation are seen in previous literature. Based on Cooper's research (1972), foreign policy will also influence an individual country's policy and regulations, concerning the stringency in trade flows and the spirit of cooperation.

Moreover, the study of international political economics needs more attention on China in response to Beijing's massive contribution as a major international economic power. Previous studies on international political economics have drawn the correlation between the trade relationship with the U.S. and observing countries' foreign policy with the U.S. According to the Commission's annual report, the percentage of inward Chinese direct investment has vertically raised in both types of greenfield investment and merging and acquisition (hereafter M&A).

Furthermore, the selection of China regarding trade relations and investment will allow the research to measure the degree of EU member states' awareness of economic relations when confronting China with both cooperation and competition. The amount of Chinese inward investment in the EU doubled yearly from 2003 to 2016 (Hanemann and Huotari, 2018, p.16). Featuring the higher percentage of state-sponsored and state-affiliated investment, which differs Chinese inward FDI from other foreign investments in the EU, each member state's response will highlight a state's nature in economic-oriented policy and openness toward disputed investors. The characteristic also relates to the balance in coping mechanisms between the national security concern and the autonomy in following and interpreting the Union's policy. Due to the complex and tangled situation, having a better understanding of the relationship with China and the impact on EU policy becomes more important for the EU and the member states.

Lastly, the year 2019, chosen to be the observation of the year in the research, marks the regulation as instrumental in preserving Europe's strategic interests while keeping the EU market open to investment, but unconditionally open to foreign investment (European Commission, 2020). Coincidentally, in March 2019, the EU lays out a new strategy taking

China as a partner, a competitor, and a systematic rival and releases the framework for the FDI screening mechanism. The milestones mark the EU's emphasis on treating China in a broader, more comprehensive manner. The data of import and export in 2019 is used, since the global economy has been catastrophically influenced by the Covid-19 pandemic. Hence, the selection of 2019 is expected to observe each member state's plan and understanding of their national framework in the first place. In addition, the data availability in 2019 secures the research with complete numbers in independent variables (hereafter IV) and dependent variables (hereafter DV).

4.3. Sample

What needs to be further explained beforehand is the different numbers of observations between the H1.1. and H1.2. hypotheses. The observing numbers in H1.1. hypothesis has 27 as the number of member states in the European Union. However, extending from H1.1. hypothesis, H.1.2. hypothesis only examines 18 observations, symbolising the 18 European Union member states which already construct their FDI screening mechanisms.

Following the two levels of sub-hypotheses in the research, I collected the 27 observations, as the counterpart of the current 27 EU member states, from the official report and website of the European Commission. The data of the time-driven adaptation of national FDI policy is gathered with 5 various differentiations from the first report of the EU's FDI screening implementation and regulations by the Commission (2021, p.12)[6].

Regarding the sample for measuring stringency, the data concerning the EU member states of their national FDI screening mechanisms and of their amendments are assembled from the official list of screening mechanisms provided by the Commission and notified by the EU member states[7]. The list with 69 legal documents records the wholesome samples for the scale of the research. In order to clearly capture the stringency of legal frameworks in each observing state, 69 legal documents are merged as 18 observing documents by country.

4.4. Dictionary Method

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[6] Available at First Annual Report on the screening of foreign direct investments into the Union - Brochure (europa.eu)

[7] Available at List of screening mechanisms notified by Member States (europa.eu)

In the research, dictionary method is implemented to conduct text analysis for acquiring the numeric variable regarding the stringency of the legal language. Dictionary-oriented methods are commonly appropriate when an existing high-quality dictionary is available that is matched the research interest. One noteworthy type of implementing dictionary method is a sentimental analysis, which can be conducted by quantifying the value of a given text by detecting words that concern affect or opinion in the description (Sigler, 2022). Two major ways are often used for creating these dictionaries, either by examining comparing text-based evaluations of products in online forums to rating systems or via systematic observation of people writing who have been primed to write about different emotions (Bail, n.d.)

When conducting text analysis with the dictionary method, the research goes through three processes: corpus construction, tokenization, and a document-feature matrix (dfm) creation. Corpus Construction means the process of extracting the data from unorganised and/ or semi-structured machine-readable documents (Kumar, 2010, p.37). The process of tokenization takes charge of separating the text into white spaces and removing the punctuation marks which are not related to abbreviations (Kumar, 2010, p.37). Tokenization is useful for marking meaningful phrases (Joseph & Jeba, 2019, p.3690). The next step is to perform pre-processing such as stemming and removing numbers, punctuations, symbols, and stopwords followed by creating the document-feature matrix, which scans the most frequent words. The process helps the research focus on the important content while implementing a dictionary method in capturing the interests of the study, for example measuring stringency in this research. However, the step of document-feature matrix creation will be skipped in the research, since the research does not focus on top frequency in texts but on capturing words through selected dictionaries.

To portray the attitude of the legal language being used in the mechanism, I plan to implement the stringency analysis of legal documents through the existing dictionary, provided by Georgia State University (hereafter GSU) (Tucker et al., 2021).

The dictionary by Tucker et al. accounts for seven different types of words: (1) Negative; (2) Positive; (3) Legal, (4) Negators; (5) Uncertainty; (6) Degree; and (7) Modal. The dictionaries are initially built by examining the documents of financial disclosures from 2010 to 2018 (Tucker et al., 2021, p.5). In the research, a scoring framework that produces abounded, the composite score for each disclosure section is applied to test the magnitude of a word expressing intensity in the narrative (Tucker et al., 2021, p.5-6). Given the concept that the

more stringent the act is, the less lenient this document can be assumed to be, I intend to specifically focus on measuring stringent language in the document.

4.5. Method of Analysis

The collected data will be examined in R (version 3.6.3), a programming language and environment for statistical calculating and graphic illustration. The hypotheses will be investigated through the Ordinary Least Square (OLS) regression model (R function "lm"), which suits the research design, focusing on how the IV relates to the DV and pursuing the possibility that the hypothesis happens. In addition, the availability of the research design allows testing the effect of the explanatory variable (trade dependency on China) on the response variable (the adaptation of the national FDI screening policy and the number of stringent words being mentioned in the national FDI legal document), while adding up the control variables for mitigating the omitted variable biases (i.e.,).

However, OLS regression is commonly known for conducting a large-N study (Jenkins & Quintana-Ascencio, 2020), where the amount of this research does not fit the impression in the first place. The previous research on quantifying the proper number of observations for running OLS regressions models suggests that N ≥ 25 observations are recommended for contributing to the portrayal of variances among samples in research (Jenkins et al., 2020). Furthermore, an empirical study also argues that the OLS regression with N = 20 observations demonstrates the best accuracy rate compared to other regression techniques across simulations with the relatively lowest bias (Gavilanes, 2019, p.35). Hence, the amounts of observations in the H1.1. (N = 27) and H1.2. (N = 18) hypotheses in the research are still expected to satisfy the potential of drawing the correlations via the OLS regression model. Although the small-N problem regularly attracts the criticism of 'Too Many Variables, Too Few Cases', Ebbinghaus (2006, p.4016) argues that the issue occurs in the induction rather than a deductive proposition. As a

result, the method of analysis will be less likely to face the problem since the research carries on with the deductive process.

Table 1 below presents a summary of the variables used in the research project. The selection of the DV, the IV, and the control variables will be presented in the paragraph below as explanations of the definition and operationalization of core concepts.

Summary of the Variables

Variable Name (Years)	Code Name	Type	Symbol	Measurement
FDI Development (2021)	*develop*	Outcome	Y1	Categorical variable. 0 = Member States with no publicly reported initiative underway; 1 = Member States having initiated a consultative or legislative process expected to result in the adoption of a new mechanism; 2 = Member States having initiated a consultative or legislative process expected to result in the amendments to an existing one; 3 = Member States having adopted a new national FDI screening mechanism; 4 = Member States having adopted amendments to an existing mechanism
Stringency (2022)	*string*	Outcome	Y21	Numeric variable. Concerned the times of words being captured through text analysis by dictionary method in each document. The number is collected with the times of words in the dictionary of 'Stringence'.
Stringency Score (2022)	*string.score*	Outcome	Y22	Numeric variable. Concerned the times of words being captured through text analysis by Dictionary method in each document. The score is calculated by the times of words in the dictionaries of 'Stringency' and 'Degree' multiplying the attributed magnititude.
Stringency Rate (2022)	*string.rate*	Outcome	Y23	Numeric variable. Concerned the percentage of words being captured through text analysis by Dictionary method. The equation of the rate is to add up times of words in the dictionaries of 'Stringency' and 'Degree' being mentioned dividing the numbers of characters

Variable Name (Years)	Code Name	Type	Symbol	Measurement
				in each document.
Trade Dependence Index on China in Direct Trade Value (2019)	*tdi*	Explanatory	X11	Numeric variable. Concerned the trade dependence in direct value of direct import and export between an observing country and China in 2019.
Trade Dependence Index on China in Value-Added Measurement (2018)	*tdi.valueadded*	Explanatory	X12	Numeric variable. Concerned the trade dependence in value-added measurement with the direct import and export between an observing country and China in 2018.
Investment Dependence Index (2020)	*idi*	Control	X2	Numeric variable. Concerned the investment dependence in accumulated value by calculating the distribution of inward Chinese FDI stocks between 2000-2020.
Restriction on using Huawei 5G Infrastructure (2021)	*restrict.huawei5g*	Control	X3	Categorical variable. 0 = Already using or planning to use Huawei 5G infrastructure or leaving the door open to any 5G provider including Huawei; 1 = Unlikely using Huawei 5G infrastructure; 2 = Imposing restriction on using Huawei 5G infrastructure; 3 = Ban of using Huawei 5G infrastructure in effect

Variable Name (Years)	Code Name	Type	Symbol	Measurement
Perception of BRI (2019)	*percept.bri*	Control	X4	Numeric variable. Concerned the perception of the BRI project measured among European countries between 2017-2019.
Efficiency of Legal Framework in Challenging Regulations (2019)	*efficient.lawchange*	Control	X5	Numeric variable. On a scale of 0-100.
Domestic Competition (2019)	*dome.compete*	Control	X6	Numeric variable. On a scale of 0-100.
Trade Openness (2019)	*tradeopen*	Control	X7	Numeric variable. On a scale of 0-100.
GDP Growth (2019)	*growth .gdp*	Control	X8	Numeric variable.
FDI Restrictiveness (2020)	*fdi.restrict*	Control	X9	Numeric variable. On a scale of 0-1.
Regulatory Quality Index	*regu.quali*	Control	X10	Numeric variable. On a scale of -2 - +2.

Variable Name (Years)	Code Name	Type	Symbol	Measurement
(2020)				
Government Effectiveness Index (2019)	*gov.effective*	Control	X11	Numeric variable. On a scale of -2 - +2.
Patent Protection Index (2021)	*patent.index*	Control	X12	Numeric variable. On a scale of 0-7.

Table 1. Summary of Variables

The first step of my research starts from collecting the data from different databases on an Excel sheet. Next, I respectively generate the data through the function of calculation in self-designed formulas including 'Stringency Score', 'Stringency Rate', 'Trade Dependence Index on China in Direct Trade Value', 'Trade Dependence Index on China in Value-Added Measurement', and 'Investment Dependence Index'. Subsequently, all the data is loaded into R, with all the variables correctly loaded as 'factor'. The formula for a simple linear regression is presented below:

$$Y = \alpha + bX$$

The X is the explanatory variable (e.g. trade dependence index on China in direct trade value and in value-added measurement), while Y is the outcome variable (e.g. the time-driven stages of adapting FDI screening mechanism and the degree of stringency in the FDI screening legal document). The slope of the prediction line is b, and α is the intercept (the value of y when x = 0). The following step is to run a multiple regression with the inclusion of all the control variables:

$$y = \alpha + b_1X_1 + b_2X_2 + b_3X_3 +\dots b_{12}X_{12}$$

4.5.1. Dependent Variables

In **H1.1.** research hypothesis, the dependent variable will be introduced as a categorical variable with five levels of groups, which reflects the latest operational development of national FDI screening mechanisms among the EU member states as of 1 August 2021 (European Commission, 2021). The selection of this DV would help the research specifically explore the factor of timing when an individual EU member state regulates foreign investment. Regardless of the EU-level framework of the FDI screening mechanism, the fact that EU member states construct their national mechanisms at different times is expected to portray the diversification of each member state's attitude towards FDI policy.

The dependent variable for **H1.1.** hypothesis is coded from 0 to 4. The logic behind the coding principle concerning the categorical variable reveals the factor of timing in the development of national FDI policy in the EU member states. One of the coding processes that need to be elaborated is that a country that already has an existing national FDI is coded as a more advanced development than a country requiring adapting a new mechanism in the national legal framework. It highlights the factor of timing in the development of the national FDI screening

mechanism that a country has a more assertive awareness of the issue of FDI inflows before the Commission officially issued the establishment of a framework for the screening of foreign direct investments into the Union to the member states on 19 March 2019. Accordingly, a state undergoing the process of adopting amendments has been coded with a higher number than that adopting a new FDI screening mechanism.

Another coding principle is that countries already adapting the FDI screening mechanism in the national legal framework within two and half years (from March 2019 when the Commission issued the establishment of a framework for the screening of foreign direct investments into the Union, to August 2021, when the first report on the development of national FDI screening mechanism in the EU member states was published) is coded as a more advanced development than the country without adopting the EU's common FDI policy. The coding sense, to some extent, could reflect a country's understanding and appreciation of the issue. However, the coding principle is perceived with the bias where an institution's availability and capability in adopting changing policy might be included as a misconception of attention on certain issues. Particularly, the official notification of the FDI screening mechanisms template was published in April 2021, five months before the report was released (Xueref-Poviac, 2021, p.2). The coding process assumes that the EU member states bear the same level of capacity in following the policy, Yet, it should be noted with the factor of governmental efficiency in adapting new legal policy or amending existing legal framework regarding the policy implementation from the EU-level to the national level. A slower adaptation of the EU-level policy could not be speculated as a lack of attention from the local government concerning the issue. Although the bias may limit the validity while categorising the DV, the categorical variable still could reflect the different degree of significance and development of the FDI screening mechanism in the perception of each member state.

In **H1.2.** research hypothesis, the dependent variable is introduced as a numeric variable, which captures the times of stringent language being used in the existing national FDI screening mechanisms across member states. The divergent legal language included in the national regulations is expected to differ in the degree of each state's consideration and contemplation in the framework, according to the implementation study of European policy, which focuses on the process of policy-makers trying to reach the goals in line with the EU legislation.

To conduct text analysis through Dictionary method, the analysis requires the language in the documents to match the language of the words in the dictionary. To do so, online machine translation tools could transcript the observations from other languages into the same language for better consistency in the research. This translation process counts on two online translation tools, eTranslation, and DeepL. The former is an online machine translation service provided by the European Commission, which allows quick and raw translation from and into any official EU languages; the latter is a private-owned machine learning translation tool through artificial intelligence and is commonly used by technology companies in the United States and public sectors such as Deutsche Bahn.

Although the majority of the documents are provided in English on the list of FDI screening mechanisms in the EU member states, nearly half of the pieces are marked as non-official translations. To diminish the research biases during the process of translation, a total of 69 legal documents are collected in the original language and then respectively translated to English. Due to the divergent fonts and units in the original documents, the Commission's eTranslation could not detect the words and characters and translate all the files into English at first. Therefore, I transferred the untranslatable documents provided by Romania, Italy, and Spain into the "text" file first and then copied the characters into the "words" files for continuing the research. Nonetheless, eTranslation still could not gain access in capturing the fonts in the Spanish legal documents into English translation. As a result, DeepL is employed and managed the unknown glitch in the Spanish documents.

To better evaluate the stringency in each legal document, I extracted a set of collection of words from the dictionary created by Tucker et al. (2015), categorised as 'Positive', 'Legal', 'Degree', and 'Modal', into two new dictionaries of 'Stringency' and 'Degree'. The 'Stringency' dictionary is composed of words from Tucker et al. 's dictionary of 'Positive' and 'Legal'. The positive terms are captured to identify the correlation between the stringent legal language and a positive understanding of the goal of the FDI mechanism. Examining previous financial analysis dictionaries, as compared with other observing subjects in similar economic situations, the perception of 'overly optimistic' disclosures in Tucker et al. 's design (2021, p.5) could be transformed as the positive perception is, the more stringent the narrative is. The 'Legal' words are captured from some aspects of Loughran and McDonald's (2011) Litigious and Constraining dictionaries (Tucker et al., 2021, p.7). Legal words in the list reflect limitations on enforcing Investment Strategy or risks arising from public law (Ibid). In the new definition,

I perceive the higher volume of executing the strategy and examining where the risk is, the more stringent the narrative is. Therefore, I expect the words to illustrate the stringency of legal language in the public regulation of FDI screening mechanisms.

The new intensity dictionary of 'Degree' comes from the original dictionaries of 'Degree' and 'Modal', which include weighted polarity labels that express the strength of the word signal (Ibid). 'Modal' words are polite expressions of uncertainty or expressions of discretionary authority that smooth obligations and set expectations as to rights, while 'Degree' words reflect the frequency and volume of anchor words. As a result, both categories concerning intensity could provide the volume of the stringency in the national FDI screening mechanism.

The scoring system created by Tucker et al.'s research is also included with a slight adjustment to fit in the design of this thesis research. Instead of following the previous scoring system where the 'Positive' and 'Legal' categories are respectively assigned with the degree of two points and minus one point, I merged the categories of 'Positive' and 'Legal' as the new list of 'Stringency', with every word mentioned scoring with a magnitude of two points. The thesis research plans to quantify the density of stringent words, while Tucker et al. 's research aims to evaluate the sentiment of legal words and weigh the degree of two points from Loughran and McDonald's dictionary to one point. Therefore, I assigned the 'Legal' category with the positive polarity of two points, following the original score of previous research. The scoring principle from the categories of 'Degree' and 'Modal' remains the same diagram in the newly merged list of 'Degree', distinguishing the magnitude of words with the levels of '0.25', '0.5', '0.75', and '1.25'.

Accordingly, to better apprehend the stringency of the legal frameworks in **H1.2.** hypothesis, the dependent variable will be distinguishably presented in three sub-outcome variables: '*String*', '*String_score*', and '*String_rate*'. '*String*' demonstrates the absolute number of words captured by the dictionary of 'Stringency', which represents the utter merit of how stringent the document is without the interference of words regarding 'Degree'. '*String_score*' reflects the score of the rigorous attitude towards the national FDI screening regulations, including the magnitude of each word sending a stern posture to strengthen the image through narratives. '*String_rate*' illustrates the relative value of the stringent stance in the proportionality of how many words from the dictionaries of 'Stringency' and 'Degree' being collected account for the

characters in each legal framework without attributing the assessment of each word's stringency.

4.5.2. Independent Variables

Regarding the independent variable (hereafter IV), the trade dependence index (hereafter TDI) on China will be presented as the illustration of the degree of an individual EU member state's trade relations with China. Trade dependence comprehensively uncovers the quality of the bilateral trade and economic relations by showing the reliance on a certain trade partner across global value chains (Cernat, 2019, p.7).

To calculate the trade dependence rate, I implemented the formula from the research by Johnston (1992, p.2-3) and Sahin (2020, p.763). Compared to purely counting the proportionality of the amounts of imports and exports in GDP, the index could expectedly reduce the interruption between relative independence and perfect dependency, while the values of TDI have a relationship with suitable dependency continuum (Sahin, 2020, p.763). The formula is demonstrated below:

$$TDI = TDIx + TDIm$$

$$TDIx = (Export / Import + GDP)$$

$$TDIm = (Import / Import + GDP)$$

However, the research includes two trade dependence indexes by using direct trade value and trade in value-added measurement of import and export. On one hand, the direct trade value reflects the direct importing and exporting numbers to a trading partner recorded by the local government. In this research, the value represents the direct import and export amounts between the individual EU member states and China; on the other hand, the trade in value-added (hereafter TiVA) measurement highlights the trade dependence by accumulating the origins of value-added in gross exports and imports (OECD, 2021, p.7). In that sense, the observing country's trade dependence on a trading partner will not be neglected and miscalculated the trade value in the exporting and importing numbers with the third trading country. That is to say, the TiVA value could better uncover the hidden values of export and import being dependent on the trading partners in the global value chain. In addition, the TiVA

indicator also better presents the overall dependence on certain bilateral trade relations, even though the observing country does not have a direct trade import/ export relationship in a specific industry with a trading partner (OECD, 2021). In other words, the TiVA value could reflect the product's value, contributed by China as one of the actors in the production of the global value chain, when the observing country imports/ exports products from/ to a third country.

The data regarding the GDP of 27 EU member states is collected from the World Bank Database[8]. The amounts of direct import and export trade value are gathered from Trade Data Monitor[9], providing up-to-date trade statistics for government- and think tank-led research. Statistics concerning import and export measuring trade in value added are assembled from the TiVA indicator by OECD database.[10]

4.5.3. Control Variables

To alleviate the problem of the model being affected by omitted variable bias, several control variables are integrated with the independent variable of interest in the multivariate models that are expected to draw a connection between an EU member state's trade dependency on China and their national FDI screening mechanism. These control variables could be further categorised as three topics: 'investment dependency on China', 'the engagement of the hosting countries in China's international issues, and 'the characteristics of hosting countries'.

The first control variable is the investment dependence index (hereafter IDI) on China. Following the section of the literature review, one of the components forming economic dependence is investment dependence, which concerns economic relations. In the meanwhile, investment dependence could also influence trade relations given the tangled dynamics between trade and investment. Rather than measuring the dependence rate with absolute value in a certain period of a year such as 'direct investment flows (known as FDI flow)' and 'direct investment income (known as FDI income)', I use 'direct investment stocks (hereafter FDI stocks)', measuring total direct investment at a given point in time (European Commission, n.d.). The value of FDI stock is expected to see an overall trend averagely, which could mitigate

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[8] Available at
https://wits.worldbank.org/CountryProfile/en/Country/CHN/Year/LTST/TradeFlow/Import/Partner/by-country/Product/Total
[9] Available at https://tradedatamonitor.com
[10] Available at https://stats.oecd.org/BrandedView.aspx?oecd_bv_id=tiva-data-en&doi=data-00648-en

an extreme value in a certain time to affect the result. The inward FDI stock from China is the value of Chinese investors' equity in and net loans to businesses resident in the reporting EU member economies. With the accumulated value across 20 years from 2000 to 2020, this evaluation of Chinese investment is expected to alleviate the influence of investment fluctuation due to a sudden development in a specific year.

$$IDI = \text{Cumulative value of completed FDI / FDI stocks}$$

As a result, the formula of investment dependence rate on China is to use the Cumulative Value of completed Chinese FDI in the EU 27 member states from 2000 to 2020 divided into the inward FDI stocks until 2020. The index reflects the proportionality of the completed investment flows within the period of 20 years in measuring the degree of the hosting EU country's dependency on Chinese investors. The estimation could display solid evidence of dependence even though the statistics of FDI stocks also cover the period before 2000 when the value of Chinese investment only arrived in Europe in small-scale amounts (Meunier, 2018, p.7). In terms of data collection, the statistics for FDI stocks could be collected from Eurostat, while the Chinese issues-focused think tank MERICS provides the cumulative value of completed Chinese FDI in the EU (Kratz et al., 2021).

In the second cluster, the control variables regard the hosting country's involvement in China-related and China-led cross-national economic projects in the world. The variable of 'Restriction on Huawei 5G infrastructure' is expected to reveal the hosting country's attitude in response to the issue between national security and critical infrastructure. The issue of Huawei 5G has provoked massive amounts of debate in European countries (Sacks, 2021). Several literatures also address Huawei 5G as a crucial factor when examining investment-related research (Karásková, 2021; Yang et al., 2021). The variable of 'perception of BRI' will reflect the observing country's perception of the controversial state-involved cooperation in the hosting country. Same as Huawei 5G, the BRI, relevant to China's expansionary strategy and global trade strategy by market-based investment, has faced the concern of state capitalism in the EU (Garcia-Herrero, Wolff, Xu, & Poitiers, 2020, p.49; Yang et al., 2021, p.2). Instead of purely categorising the participation as presence or absence in the BRI projects, which has been demonstrated as irrelevant in portraying the perception of BRI (Garcia-Herrero et al., 2019, p.1), the inclusion of the variable is expected to better reflect the correlation whether the attitude towards the disputed global issue would shape the development of legal regulation. In the meanwhile, the perception of BRI could also represent the related China-initiated

international project: the Chinese 16+1 Initiative (Cooperation between China and Central and Eastern European Countries) with the observing countries' overall awareness of Chinese activity.

The data regarding 'Restriction on Huawei 5G infrastructure' could be gathered from the Centre of Foreign Relations[11] (hereafter CFR), a prestigious American think tank covering international issues. Accordingly, the coding principle codifies from 0 to 3, mainly following the four categories by CFR as 'already using or planning to use', 'unlikely using', 'restriction', and 'ban in effect'. In addition, CFR also presents a category of 'Not yet considering 5G or no data' by placing EU member states, Bulgaria, Cyprus, Lithuania, Latvia, Slovenia, and Slovakia, in the list. On one hand, based on the description of these countries' circumstances regarding Huawei's status by CFR, the code of 0 ('Already using or planning to use Huawei 5G infrastructure or leaving the door open to any 5G provider including Huawei') is given to Cyprus since Nicosia stays giving full access without limitation to any 5G provider (Vou, 2021). On the other hand, Bulgaria, Lithuania, Latvia, Slovenia, and Slovakia are coded as 1 ('Unlikely using Huawei 5G infrastructure'), given that these five countries have respectively signed up the 'Clean Network Initiative' brought by the U.S. State Department (Bulgaria[12]), an MOU on '5G security' (Lithuania[13]), and a joint declaration on 5G security with the United States government (Latvia[14], Slovenia[15], and Slovakia[16]). The numbers concerning 'Perception of BRI' could be exacted from Garcia-Herrero and Xu's research (2019), which analyses the EU countries' sentiment toward the idea of trading with China and the image of BRI projects.

The control variables in the third group are intended to illustrate the characteristics of individual EU member states. To better portray statutory attitudes and responsiveness to regulations,

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[11] Available at https://www.cfr.org/blog/china-huawei-5g

[12] In October 2020, Bulgaria joined the U.S. State Department's "Clean Network" initiative (Sacks, 2021).

[13] In September 2020, Lithuania and the United States signed an MOU on 5G security, in which Lithuania pledged to evaluate the security risks of 5G suppliers (Ibid).

[14] In March 2020, Latvia, one of the first countries to have a working 5G network, signed a joint declaration with the United States calling for a "rigorous evaluation" of 5G suppliers to prevent security threats. (Ibid)

[15] In August 2020, Slovenia signed a joint declaration with the United States on 5G security, where the country pledged to avoid suppliers that "are subject, without independent judicial review, to control by a foreign government." (Ibid)

[16] Although mobile operator Orange reported testing Huawei 5G technologies in Slovakia in early October 2020, later that month the country committed to signing a joint declaration with the United States on 5G security. Weeks earlier, President Zuzana Caputova blocked Huawei from sponsoring a defense summit in the country. (Ibid)

international trade, and investment, the capacity, and capability of hosting countries should also be taken into consideration.

The quality of functioning institutions is also seen as an important factor in maintaining a country's stability and economic development (Raza, Shah & Arif, 2019). The variable index of 'regulatory quality' is planned to capture perceptions that to what extent the government can formulate and execute solid policies and regulations regarding the permission and the promotion of private sector development (World Bank, n.d.). The variable 'government effectiveness index' seeks to mark the perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies (World Bank, n.d.). The former has proven to indicate the relatively strong, positive relationship between the quality and effectiveness of trade and investment regulations employed within the host country, and the amount of FDI received by the host country (Rammal & Zurbruegg, 2006; Ranjpour, Kazerooni, Beheshti & Ghorbani, 2020; Ozekhome, 2022). The latter is also believed to likely strengthen the effect of trade on economic growth (Philémon, Alain & Christian, 2020), in line with the variable 'GDP growth' evaluating the correlation between trade dependence and FDI regulations (Alam, Kiterage & Bizuayehu, 2017).

The variable 'efficiency of the legal framework in challenging regulations' intends to highlight the state's adaptability in coping with the regulations fitting into the challenge. The inclusion of this variable is to mitigate the condition of misunderstanding the observing country's policy prominence on the FDI screening mechanism. It should be concerned that the period of legislating FDI screening mechanisms in the national framework is on a tight timeline. A country might have lower development in progressing investment legal framework because of the long administrative process in amending the regulations on rising challenges. In addition, 'Domestic Competition' and 'Trade Openness' aim to present the systematic environment of the product market in the hosting country (Schwab, 2019). Subasat's finding (2008, p.59) also suggests an unclearly and insignificantly positive relationship between removing trade restrictions and leading to improved trade openness. Previous research also includes trade openness as a decisive variable when examining the relationship with FDI flows (Ngundu et al., 2020; Wiredu et al., 2020). In that sense, trade openness could be bridged as a measurement of the degree of economic policy restriction. Furthermore, the openness to FDI is also related

to a country's economic policy and growth. Accordingly, a detailed look into the individual country's pragmatic policy based on each country's circumstances could better portray the dynamics in trade relations and FDI policy (Buethe et al., 2008, p.759; Subasat, 2008, p.59). The higher degree of trade-related variables, the lower the trade dependence on a certain trading partner could be. The aforementioned data are collected from the annual report by the World Economic Forum[17], which yearly evaluates the global competitiveness of each country.

Lastly, the variable 'Patent property index' regards a country's emphasis on domestic intellectual property protection. The majority of Chinese investment, particularly in the Western European countries, targets the ICT industries and critical infrastructure (van der Putten, 2017), which proves the importance of including the patent in observing the correlation with the development of policy and regulations. Therefore, the patent property should also be included in the study.

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[17] Available at https://www.weforum.org/reports/how-to-end-a-decade-of-lost-productivity-growth

V. RESULT

This chapter presents the result demonstrated by text analysis in Dictionary method and a sequel of simple and multiple OLS regression. It consists of four parts.

5.1 Preliminary Data Generation: Dictionary-Based Text Analysis

Before examining the correlation of trade dependence and the adaptation of the national FDI screening mechanism, it is necessary to produce stringency-oriented data in the 18 observations collected from 69 legal documents. After the processes of the corpus construction, tokenization and a document-feature matrix creation, table X shows the times of words in the self-categorised dictionaries of 'Stringency' and 'Degree' being captured. The table also presents the information regarding the stringency score, number of characters in each observation, and the stringency rate

Summary of the Dictionary-Based Text Analysis

Dictionary \\ Country	Stages of adapting FDI	Stringency					Stringency Score	Number of Character	Stringency Rate
		Stringency	Degree						
		(2)	(0.25)	(0.5)	(0.75)	(1.25)			
Austria	4	827	370	4	292	18	1990	35833	0.042
Belgium	1	NA							
Bulgaria	0	NA							
Croatia	0	NA							
Cyprus	0	NA							
Czech Republic	3	644	159	3	32	21	1379.5	30023	0.029
Denmark	3	114	229	3	95	14	375.5	13092	0.035
Estonia	1	NA							
Finland	4	47	57	0	6	10	125.25	4779	0.025
France	4	90	85	0	14	13	228	7664	0.026

Dictionary \\ Country	Stages of adapting FDI	Stringency						Stringency Score	Number of Character	Stringency Rate
		Stringency	Degree							
		(2)	(0.25)	(0.5)	(0.75)	(1.25)				
Germany	4	1176	605	22	475	82	2973	65352	0.036
Greece	1	NA							
Hungary	4	311	95	0	14	19	680	14992	0.029
Ireland	1	NA							
Italy	4	2209	991	25	439	406	5515	120535	0.034
Latvia	4	42	11	0	5	8	100.5	3589	0.018
Lithuania	4	889	287	1	29	40	1922	43270	0.029
Luxembourg	1	NA							
Malta	3	75	74	0	12	11	191.25	6202	0.028
Netherlands	2	48	45	0	36	9	145.5	4432	0.031

Dictionary \\ Country	Stages of adapting FDI	Stringency						Stringency Score	Number of Character	Stringency Rate
		Stringency	Degree							
		(2)	(0.25)	(0.5)	(0.75)	(1.25)				
Poland	4	1123	395	15	142	137		2630	59419	0.030
Portugal	2	79	22	0	6	10		180.5	2873	0.041
Romania	4	418	206	12	56	35		979.25	20246	0.036
Slovakia	3	38	14	0	24	6		105	1925	0.043
Slovenia	3	33	14	0	0	3		73.25	2035	0.025
Spain	4	1934	1571	28	310	306		4889.75	118069	0.035
Sweden	1	NA								

Table 2. Numbers of words in the dictionary of 'Stringency' and 'Degree' being captured

The result from the dictionary-based text analysis shows a positive correlation that the longer the observing document is (i.e. more characters in the observation), the higher amount of words in the dictionary of 'Stringency' has been captured. Words with the parameter of '0.25' degree have been captured the most compared to those labelled as the parameter of '0.5', '0.75', and '1.25'. The stringency rates are distributed between 0.018 and 0.041.

5.2. Hypothesis 1.1.

Table X shows the comparison of two simple linear regression models and two multiple linear regressions models. Model 1 and 2 provide the result of Experiment 1, and Model 3 and 4 present the outcome of Experiment 2. It aims to test the hypothesis of **H1.1.** for revealing the possible correlation between *the trade dependency of an EU member state on China* and *the development of their national foreign direct investment screening mechanism.*

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Regression Table.H1.1.
===============================================================================================
                                                   develop
                        (1)                (2)                (3)                (4)
-----------------------------------------------------------------------------------------------
tdi                     1.660              21.632
                        t = 0.119          t = 1.465

tdi.valueadded                                                -5.624             -4.992
                                                              t = -0.520         t = -0.344

idi                                        0.336                                 0.302
                                           t = 2.412**                           t = 1.812

restrict.huawei5g                          -0.0002                               -0.082
                                           t = -0.0005                           t = -0.179

percept.bri                                -1.358                                -1.142
                                           t = -3.345***                         t = -2.275*

efficient.lawchange                        0.090                                 0.050
                                           t = 1.522                             t = 0.763

dome.compete                               0.145                                 0.142
                                           t = 1.869*                            t = 1.524

tradeopen                                  -0.352                                -0.292
                                           t = -1.792                            t = -1.261

growth.gdp                                 0.171                                 0.178
                                           t = 0.516                             t = 0.431

fdi.restrict                               -47.909                               -46.630
                                           t = -2.350**                          t = -1.824

regu.quali                                 -9.347                                -7.435
                                           t = -3.190**                          t = -2.287*

gov.effective                              8.398                                 6.793
                                           t = 3.194**                           t = 2.409**

patent.index                               -1.497                                -0.870
                                           t = -1.269                            t = -0.625

Constant                2.493              24.029             2.746              18.570
                        t = 4.142***       t = 2.117*         t = 4.909***       t = 1.445

N                       27                 22                 26                 21
R2                      0.001              0.669              0.011              0.583
Adjusted R2             -0.039             0.228              -0.030             -0.043
Residual Std. Error  1.531 (df = 25)    1.248 (df = 9)     1.526 (df = 24)    1.457 (df = 8)
F Statistic      0.014 (df = 1; 25) 1.516 (df = 12; 9) 0.271 (df = 1; 24) 0.931 (df = 12; 8)
===============================================================================================
Notes:                                     ***Significant at the 1 percent level.
                                            **Significant at the 5 percent level.
                                             *Significant at the 10 percent level.
```

Table 3. Experiment 1: Model 1 and 2; Experiment 2: Model 3 and 4

5.2.1. Experiment 1: TDI on China in Direct Trade Values v.s. Stages of Adapting FDI Screening Mechanisms

The first model (Model 1) represents the result of the simple linear regression with the IV, the TDI on China in values of direct import and export, and the DV, the stages of the national FDI screening mechanism's current development. The second model (Model 2) showing the

multiple linear regression presents the outcome with extra eleven control variables to examine the research hypothesis further.

The result of the simple linear regression in Model 1 clearly highlights that there is almost no statistically significant relationship ($p > 0.1$) between the IV and the DV without other confounding variables in between. At a confidence level of 95%, the null hypothesis should be rejected when the value of t-statistics falls beyond the interval between -2 to +2. In the single linear regression model, the t-statistics ($t = 0.119$) confirm the notably low relationship between the IV and the DV. Therefore, the outcome suggests almost no possible evidence in the support of H1.1 at the absence of other control variables.

The regression coefficient in Model 1 shows that the value of y when x is zero (the y-intercept) is estimated to be 2.493 (Constant = 2.493). Built on the information provided by Model 1, the following prediction equation can therefore be formulated:

$$\hat{y} = \alpha + \beta x1$$
$$\hat{y} = 2.493 + (1.660)x1$$

The result reveals that for every one-point increase in the TDI on China in direct import/export value, the stage of developing national FDI screening mechanisms in the EU member states will increase 1.660 units. In other words, when the TDI on China in direct import/export value increases 1%, the level of EU member states adapting national FDI screening mechanisms would gain 0.0166-points of one level. An EU member state would be likely to develop an advanced national FDI screening mechanism to the one-level higher category with the TDI on China in direct import/export value increases 61%. The trend highlights an EU country's action towards the orientation in developing a more advanced national FDI screening mechanism, affected by their trade dependence on China, based on the TDI in direct trade values.

We expected that adding control variables would have seen a more detailed exploration in testing the hypothesis. However, in Model 2, the result of the multiple linear regression also displays a low statistically significant relationship between the IV and the DV ($p > 0.1$; $t = 0.119$). While the coefficient of the explanatory variable increases from 1.660 units to 21.632 units, the slope of the equation in Model 2 becomes steeper than in Model 1. The result reveals that every 1% increase of the TDI on China in direct trade values will lead to a 0.22-level growth in the DV. An EU member state would possibly develop its national FDI screening mechanism to the next stage with a more stringent framework, influenced by at least 4.7%

increase of TDI on China in direct trade values. The following prediction equation below could be derived from the result in Model 2:

$$\hat{y} = 24.03 + 21.63x1 + 0.34x2 + (-0.0002)x3 + (-1.36)x4 + 0.09x5 + 0.15x6 + (-0.35)x7 + 0.17x8$$
$$+ (-47.91)x9 + (-9.35)x10 + 8.4x11 + (-1.5)x12$$

Therefore, we could only address that, in both models, the trade dependence on China in direct trade values does not create a statistically significant result in the stages of developing national FDI screening mechanisms among the EU countries. The inclusion of control variables in Model 2 indicates no probable evidence in support of the H1.1. hypothesis.

However, the notably low relationship in statistics between the IV and the DV does not suggest the insignificant correlation in the multiple linear regression, portraying the relationship between other compounding variables and the stages of developing national FDI screening mechanisms among the EU countries. In line with the literature regarding the development of FDI regulations, the hosting country's involvement in China-related international projects and its characteristics regarding trade and investment environment matters in developing national FDI screening mechanisms.

Regarding China-related global issues, Model 2 identifies that at the significant of 99% level in the model the hosting country's '*Perception on BRI*' (t = -3.345; p < 0.001) is significantly related to the DV with the decrease by -1.358 units. In addition, there are statistically positive relationships between the characteristics of hosting EU countries and levels of developing national FDI screening mechanism of EU member states (DV) at the significant of 95% level (p < 0.01): '*Investment dependence index*' is related to the DV increasing 0.336 units (t = 2.412); the indicator of '*FDI restrictiveness*' concerns the DV with -47,909 units decreases (t = -2.350); the index of '*regulatory quality*' decreases by -9.347 units of to the DV (t = -3.190); the index of '*governmental effectiveness*' increases by 8.398 units of the DV (t = 3.194). At the significant of 90% level (p < 0.05), the indicator of '*domestic competence*' is related to the DV with increasing 0.145 units (t = 1.869). The outcome variable does not seem to be influenced by the other control variables including 'Restriction on using Huawei 5G infrastructure', 'Efficiency of legal framework in challenging regulations', 'Trade openness', 'GDP growth' and 'Patent protection index'.

5.2.2. Experiment 2: TDI on China in TiVA Measurement v.s. Stages of Adapting FDI Screening Mechanisms

The third model (Model 3) presents the result of the simple linear regression with the TDI on China in value added measurement as the IV, and the stages of current development of the national FDI screening mechanism as the DV. The fourth model (Model 4) provides the outcome of multiple linear regression, with the same eleven control variables to further investigate the research hypothesis.

Model 3 shows the result of the simple linear regression with nearly zero statistically significant relationship ($p > 0.1$) between the IV and the DV, confirmed by the t-statistic (-0.520) falling into the interval from -2 to +2. Same as Model 1, the outcome in Model 3 illustrates the extremely low relationship in the support of the H1.1 hypothesis prior to adding other control variables. The result also displays that when the TDI on China in value-added measurement gains 1%, the stage of EU member states developing national FDI screening mechanisms would decrease 0.056 units (-5.624). Namely, a 18% increase of TDI on China in value-added measurement would contribute to the stage of EU member states developing national FDI screening mechanisms moving towards one level below. The interpretation suggests that the EU member states' trade dependence on China, based on the TDI in TiVA, affects the development of national FDI screening mechanisms among EU countries.

$$\hat{y} = \alpha + \beta x1$$
$$\hat{y} = 2.746 + (-5.624)x1$$

Model 4 demonstrates the result of the multiple linear regression, where the statistically significant relationship between the TDI on China in TiVA measurement and stages of developing FDI screening mechanisms stays low correlation ($p > 0.1$; $t = -0.344$). The result indicates that every 1% increase of TDI on China in TiVA measurement will result in a reduction of 0.05-level (-4.992) in the DV. An EU country would probably work on the national FDI screening mechanisms moving towards one less advanced level if its TDI on China in value-added measurement increases more than 20%.

Nonetheless, the result of Model 3 and Model 4 seems to be contradictory to the EU's plan of constructing more well-rounded and comprehensive FDI screening mechanisms among the member states. The predicted equation of both models displays the negative slopes, which

implies the possibility in developing FDI screening mechanism towards a lower stage. Currently, 24 of EU member states have either put their FDI screening mechanism in place or undergone their adopting process in including FDI screening mechanism into their national legal regulations. The rest of EU member states, Bulgaria, Croatia, and Cyprus have not publicly reported initiatives underway for constructing their FDI screening mechanism. The phenomenon confirms that the development of national FDI screening mechanisms among these countries will either continuously stay in the current stage or advance to a higher-developed level, instead of developing towards a lower level. As a result, the trade dependence on China in value-added measurement does not reveal a statistically significant result in the stages of national FDI screening mechanism development in the EU member states.

In examining the relationship between the IV and the DV with the inclusion of control variables, Model 4 highlights that the governmental effectiveness index and the DV share a significant relation with the increase by 6.793 units at the significant of 95% level (t = 2.409; p < 0.01), which stays the same significant level in Model 2. At the significant of 90% level (p < 0.05), control variables of the hosting country's perception on BRI (t = -2.275) and the regulatory quality index relate to the DV with respectively decreasing 1.142 units and 7.435 units. Compared to Model 2, both variables have individually developed less statistically significant relationships with the time-oriented stages of EU member states adapting national FDI screening mechanisms.

The dependent variable stays unaffected by the control variables including IDI, restriction on Huawei 5G, efficiency in law change, the indicator of domestic competence, trade openness, GDP growth, the index of FDI restrictiveness, and patent protection index. With the presence of control variables, Model 4 demonstrates no possible evidence supporting the H1.1 hypothesis.

Overall, Model 1 to 4 show the H1.1. hypothesis has to be rejected, as no statistically significant correlation between the TDI on China either in direct trade values or in value-added measurement and stages of developing national FDI screening mechanisms among the EU member states. In other words, an EU member state's trade dependency on China has no statistically significant relationship to the timing of EU member states adapting their development of national FDI screening mechanisms. However, the multiple linear regression model identifies there are statistically significant correlations among the dependent and several

control variables such as '*Investment dependence index*', '*Perception of BRI*', '*Domestic Competence*', '*FDI Restrictiveness*', '*Regulatory Quality*', and '*Governmental Effectiveness*'.

5.2.3. Robustness Check

Robustness check aims to reveal whether the study established solid results. Both the R^2 value and the adjusted R^2 value demonstrate the explanatory power, the capability of the linear regression model to what extent the IV could explain the amount of variance in the DV. Nonetheless, examining the regular R^2 value is commonly used in instances of linear regression models, the adjusted R2 value offer a more precise estimation concerning the numbers of the variability analysed while several variables are included in the model (Diez, Barr & Cetinkaya-Rundel, 2017, pp. 377).

Regarding single linear regression models, the R^2 value of Model 1 symbolises that merely 0.1% of the amount of the variance in the development of the national FDI screening mechanism could be explained by the numbers of the TDI in direct import/ export value. The R^2 value in Model 3 clarifies that the number of the TDI in value added measurement is capable of interpreting 1.1% of the variation in the EU member states' national FDI screening mechanism. The negative adjusted R^2 values in the Model 1 (-0.039) and the Model 3 (-0.030) even mark the poor predictive values in illustrating the correlation between the stages of EU countries' national FDI screening mechanism and their trade dependence on China either through the measurements of either direct import/ export value or value-added TiVA data.

With the inclusion of control variables for multiple linear regression models, Model 2 has shown the explanatory power of $R^2 = 0.669$, which highlights that the regressions explain 70% of the variance in the level of developing national FDI screening mechanism (Y1). The adjusted R^2 value of Model 2 demonstrates the better explanatory power at interpreting 23% (adjusted $R^2 = 22.5\%$) of the variation in the dependent variable, where the regression has greatly strengthened the explanation of the correlation between the IV and the DV. The Model 4 regression also displays its strong explanatory power in describing 58% of the variance in the DV ($R^2 = 0.583$) compared to that of Model 3, although the negative adjusted R^2 value reveals its less coefficient of determination at explaining the variance in the DV. Due to the extremely low strength of Model 4, the formula of the multiple regression is not applicable.

5.3. Hypothesis 1.2.

Table X, table X, and table X respectively show the comparison of two simple linear regression models and two multiple linear regressions models in each table. It aims to test the hypothesis of **H1.2.** for analysing the possible correlation between *the trade dependency of an EU member state on China* and *the stringency of the language used in their national foreign direct investment screening mechanism.* Three featured measurements reflecting the stringency are introduced and respectively used as the dependent variable: the number of stringent words, the stringency score and the percentage of stringent words.

5.3.1. Experiment 3: TDI on China v.s. the Number of Stringent Words in the National FDI Screening Mechanisms

Table X describes the result of testing the correlation of whether an EU country's trade dependency on China affects the number of strict words in their national FDI legal documents. Model 5 and Model 6 represent the results of the simple and multiple linear regression with the IV, the TDI on China in values of direct import and export, and the DV, the times of strict words being used in the national FDI screening mechanism. Designed with the same DV, the IV in Model 7 and Model 8 are replaced with the index of trade dependency on China in value-added measurement to display the results through the simple linear regression and the multiple linear regression.

```
Regression Table.H1.2.string
===============================================================================================
                                                  string
                         (5)              (6)              (7)              (8)
-----------------------------------------------------------------------------------------------
tdi                    -4,156.150       -15,717.520
                       t = -0.621       t = -0.441

tdi.valueadded                                           -8,974.459       -82,035.890
                                                         t = -0.932       t = -1.086

idi                                     -184.644                          -214.616
                                        t = -0.636                        t = -0.962

restrict.huawei5g                       -146.242                          808.704
                                        t = -0.220                        t = 0.720

percept.bri                             277.670                           1,084.376
                                        t = 0.233                         t = 0.842

efficient.lawchange                     -37.614                           -157.081
                                        t = -0.385                        t = -1.031

dome.compete                            -21.224                           -285.679
                                        t = -0.135                        t = -0.936

tradeopen                               279.937                           745.688
                                        t = 0.544                         t = 1.128

growth.gdp                              21,826.910                        55,638.900
                                        t = 0.477                         t = 1.042

fdi.restrict                            -350.479                          -95.201
                                        t = -0.733                        t = -0.179

regu.quali                              2,893.108                         6,571.357
                                        t = 0.349                         t = 0.887

gov.effective                           -3,701.957                        -5,286.753
                                        t = -0.504                        t = -1.002

patent.index                            -43.049                           1,460.522
                                        t = -0.023                        t = 0.594

Constant               728.960          -11,348.600       894.314         -32,826.850
                       t = 2.309**      t = -0.411        t = 2.081*      t = -1.017

N                         18               15               17               14
R2                       0.024            0.647            0.055            0.817
Adjusted R2             -0.038           -1.470           -0.008           -1.385
Residual Std. Error 690.061 (df = 16) 1,129.395 (df = 2) 682.978 (df = 15) 1,123.809 (df = 1)
F Statistic          0.385 (df = 1; 16) 0.306 (df = 12; 2) 0.868 (df = 1; 15) 0.371 (df = 12; 1)
===============================================================================================
Notes:                                       ***Significant at the 1 percent level.
                                              **Significant at the 5 percent level.
                                              *Significant at the 10 percent level.
```

Table 4. Experiment 3: Model 5, 6, 7, and 8

The results of Model 5 (t = -0.621) and Model 7 (t = -0.932) show the IV, neither values in calculating the trade dependence on China, has nearly no statistically significant relationship (p > 0.1) with the amount of strict words in national FDI legal documents (DV). Including the eleven control variables in the multiple regressions of Model 6 (t = -0.441) and Model 8 (t = -1.086), the outcomes present the result with a barely non statistically significant correlation. Although the values of the coefficient of the explanatory variables in the single linear

regression models (Model 5 and Model 7) further reduced in the multiple regression models[18] (Model 6 and Model 8), there is still no feasible evidence in the models that supports the H1.2. hypothesis.

5.3.2. Experiment 4: TDI on China v.s. the Stringency Score in the National FDI Screening Mechanisms

Table X presents the relationship between the trade dependency on China and the stringent score of the national FDI screening frameworks among the EU countries. Model 9 and Model 10 provide the outcome when examining the correlation of the index of trade dependence on China in direct trade values and stringency score of each national FDI screening document in the simple and multiple linear regression models. Replacing the IV with the trade dependence on China index in the TiVA measurement, Model 11 and Model 12 displays the result on how the explanatory variable affects the scores reflecting the stringency of observing legal documents.

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[18] From Model 5 to Model 6, the number of stringent words was brought down from -4,16 units to -15,72 units; from Model 7 to Model 8, the number decreased from -8,97 to -82,04 units.

```
Regression Table.H1.2.score
============================================================================================
                                              string.score
                          (9)             (10)               (11)              (12)
--------------------------------------------------------------------------------------------
tdi                    -10,735.710     -34,461.510
                       t = -0.647      t = -0.401

tdi.valueadded                                            -23,684.520       -190,191.600
                                                          t = -0.998        t = -1.014

idi                                    -410.084                             -491.298
                                       t = -0.586                           t = -0.887

restrict.huawei5g                      -413.207                             1,797.561
                                       t = -0.258                           t = 0.644

percept.bri                            487.990                              2,413.018
                                       t = 0.170                            t = 0.755

efficient.lawchange                    -81.031                              -361.719
                                       t = -0.343                           t = -0.956

dome.compete                           -24.450                              -643.485
                                       t = -0.064                           t = -0.849

tradeopen                              624.586                              1,729.402
                                       t = 0.503                            t = 1.054

growth.gdp                             47,803.950                           128,052.900
                                       t = 0.433                            t = 0.966

fdi.restrict                           -878.809                             -286.676
                                       t = -0.762                           t = -0.217

regu.quali                             5,710.784                            14,659.960
                                       t = 0.285                            t = 0.797

gov.effective                          -8,020.096                           -12,068.590
                                       t = -0.453                           t = -0.921

patent.index                           -163.179                             3,353.506
                                       t = -0.036                           t = 0.549

Constant                1,794.179      -25,224.540        2,240.586         -76,301.350
                        t = 2.291**    t = -0.379         t = 2.115*        t = -0.952

N                          18              15                 17                14
R2                        0.025           0.668              0.062             0.816
Adjusted R2              -0.035          -1.322             -0.0003           -1.391
Residual Std. Error 1,711.326 (df = 16) 2,723.871 (df = 2) 1,683.399 (df = 15) 2,790.239 (df = 1)
F Statistic          0.418 (df = 1; 16)  0.336 (df = 12; 2) 0.996 (df = 1; 15)  0.370 (df = 12; 1)
============================================================================================
Notes:                                            ***Significant at the 1 percent level.
                                                   **Significant at the 5 percent level.
                                                    *Significant at the 10 percent level.
```

Table 4. Experiment 4: Model 9, 10, 11, and 12

The values of trade dependence on China index, either in direct trade numbers or in value-added sum, have barely shown statistically significant correlation ($p > 0.1$) with the score computed by the self-defined stringency calculation system in evaluating the national FDI screening mechanism of the EU member states based on the t-statistic in the single regression of Model 9 (-0.647) and Model 11 (-0.998). With the inclusion of eleven compound variables, the multiple regressions (Model 10: t = -0.401; Model 12: -1.014) demonstrate the same outcome of non statistically significant difference in the DV. The models bear with no possible evidence in favour of backing the H.2. hypothesis in spite of the tremendous shrinking in the

values of the coefficient of the explanatory variables from the simple regression models to the multiple ones[19].

5.3.3. Experiment 5: TDI on China v.s. the Percentage of Stringent Words in the National FDI Screening Mechanisms

Table X shows the result of how the trade dependence on China of the EU states has affected the percentage of stringent words in each national FDI legal document. The presentation in Model 13 and Model 14 are examining the correlation between the TDI on China in values of direct import and export (IV) and the percentage of stringent words from both dictionaries being mentioned in individual national FDI screening mechanisms (DV) in the simple and multiple linear regression. Substituting the IV as the index of trade dependence on China in value-added measurement, Model 15 and Model 16 presents the results of the possible correlation between the explanatory variables and the outcome variable (the percentage of stringent words in these mechanisms are influenced).

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[19] From Model 9 to Model 10, the stringent score was brought down from -10,736 units to -34,462 units; from Model 11 to Model 12, the score reduced from -23,685 to -190,192 units.

```
Regression Table.H1.2.rate
================================================================================
                                              string.rate
                    (13)              (14)              (15)              (16)
--------------------------------------------------------------------------------
tdi                -0.017            0.265
                 t = -0.262        t = 1.089

tdi.valueadded                                       -0.016            0.078
                                                   t = -0.160        t = 0.100

idi                                   0.003                            0.001
                                    t = 1.473                        t = 0.505

restrict.huawei5g                    -0.002                           -0.0001
                                   t = -0.449                       t = -0.010

percept.bri                          -0.010                           -0.002
                                   t = -1.269                       t = -0.139

efficient.lawchange                  0.0004                          -0.0002
                                    t = 0.644                       t = -0.122

dome.compete                          0.001                            0.001
                                    t = 1.241                        t = 0.171

tradeopen                            -0.004                           -0.001
                                   t = -1.071                       t = -0.159

growth.gdp                           -0.231                            0.064
                                   t = -0.739                        t = 0.117

fdi.restrict                          0.002                            0.002
                                    t = 0.612                        t = 0.442

regu.quali                           -0.068                           -0.022
                                   t = -1.197                       t = -0.283

gov.effective                         0.047                            0.005
                                    t = 0.938                        t = 0.097

patent.index                          0.008                            0.018
                                    t = 0.632                        t = 0.693

Constant            0.032             0.128             0.032            -0.040
                 t = 10.507***     t = 0.677        t = 7.415***      t = -0.120

N                     18                15                17                14
R2                  0.004             0.768             0.002             0.724
Adjusted R2        -0.058            -0.621            -0.065            -2.589
Residual Std. Error 0.007 (df = 16)  0.008 (df = 2)   0.007 (df = 15)  0.012 (df = 1)
F Statistic        0.069 (df = 1; 16) 0.553 (df = 12; 2) 0.026 (df = 1; 15) 0.218 (df = 12; 1)
================================================================================
Notes:                              ***Significant at the 1 percent level.
                                     **Significant at the 5 percent level.
                                      *Significant at the 10 percent level.
```

Table 5. Experiment 5: Model 13, 14, 15, and 16

With the result of t-statistics (Model 13: t = -0.262; Model 15: t = -0.160), both single linear regression models presents barely none of statistically significant relationships (p > 0.1) existed between the trade dependence on China, either the values in direct trade numbers or that in TiVA measurements, and the percentage of stringent words in the legal documents. After adding the eleven control variables, the multiple regressions of Model 14 (t = 1.089) and Model 16 (t = 0.100) shows nearly no statistically significant correlation occuring in the IV and the DV. The noteworthy increases in the value of the coefficient of explanatory variables are

perceived from the single linear regression models (Model 13 and Model 15) to the multiple regression models[20] (Model 14 and Model 16). However, none of the models offers sufficient results in the support of the H1.2. hypothesis.

To sum up the finding from section 5.3.1 to 5.3.3, the regressions from Model 5 to Model 16 suggest the research to reject the H1.2. hypothesis. The correlation between the TDI on China in both measurements and the stringency of the language used in the national FDI screening mechanism has proven to be not statistically significant. Accordingly, EU member state's trade dependency on China is not statistically significant correlated to shaping the stringent language captured from the national FDI screening mechanism of the EU member states in the study. Additionally, no additional control variables have statistically bridged significant correlation with the DV in the hypothesis.

5.3.4. Robustness Check

In terms of the explanatory power of the single linear regression models, the R^2 values in the six models stays quite low between 0.02 to 0.06[21]. The highest R^2 value among the six regressions (0.062 in Model 11) could only interpret 6.2% variation, while the negative adjusted R^2 values[22] reaffirms the incapability of these models in explaining the DV.

As for the multiple linear regression models, the regular R^2 values have marked the explanatory powers capable of explaining 60% to 80% of the variance concerning the stringency (in numbers, scores, and rates) of legal documents. These values seem to reinforce the explanatory powers of these models. However, more precise estimations through the adjusted R^2 values (Model 6: -1.47; Model 8: -1.39; Model 10: -1.32; Model 12: -1.39; Model 14: -0.62; Model 16: -2.59) highlight the modest level of coefficient determination in the six multiple linear regression models at explaining the variance of stringency in legal documents. Hence, the prediction formula is not provided since these models lack the high degrees of robustness for predicting the statistical relations.

---

[20] From Model 13 to Model 14, the percentage of stringent words in the documents gained from -0.02 units to 0.27 units; from Model 15 to Model 16, the percentage increased from -0.02 to 0.08 units.

[21] The R^2 values are respectively 0.024 in Model 6, 0.055 in Model 8, 0.025 in Model 10, 0.062 in Model 12, 0.004 in Model 14, and 0.002 in Model 16.

[22] The adjusted R^2 values in order are -0.038 in Model 6, -0.008 in Model 8, -0.035 in Model 10, -0.0003 in Model 12, -0.058 in Model 14, and -0.065 in Model 16.

5.4. Extra Experiment 6: Stages of Adapting FDI Screening Mechanisms v.s. Stringency of FDI Screening Legal Documents

The additional experiment can be seen as an extension of the robustness check on the measurement of the stringency intensity in the legal framework. Inspired by the merely no statistically significant results of both hypotheses, the process can help examine the robustness of method design via dictionary-based text analysis, since this research is an innovatively exploratory study combined with sentimental analysis and policy stringency analysis. Specifically, the exploration concerns the examination whether the selection of words representing stringency could clearly capture the strictness in the legal language. By portraying the relationship, we expect to see whether the earlier stage a country developing or adapting the national FDI screening mechanism is, the more stringent the legal language is in the framework.

Table X demonstrates the result of three single linear regression models, respectively examining the correlation between the timing-driven stages of adapting the national FDI screening mechanism (IV) and the degree of stringency in three features (DV). Three features as outcome variables take turns to be placed in Model 17 (i.e. the numbers of stringent words), Model 18 (i.e. the stringency score), and Model 19 (i.e. the percentages of stringent words).

```
Regression Table.dev.str
========================================================================
                                  string     string.score   string.rate
                                   (17)           (18)           (19)
------------------------------------------------------------------------
develop                          457.706       1,113.544       -0.002
                               t = 2.175**    t = 2.119*     t = -0.937

Constant                        -1,041.026    -2,537.224       0.039
                               t = -1.387     t = -1.354     t = 4.860***

N                                   18             18             18
R2                                0.228          0.219          0.052
Adjusted R2                       0.180          0.170          -0.007
Residual Std. Error (df = 16)    613.483       1,531.810        0.007
F Statistic (df = 1; 16)         4.731**        4.492*          0.878
========================================================================
Notes:                         ***Significant at the 1 percent level.
                                **Significant at the 5 percent level.
                                 *Significant at the 10 percent level.
```

Table 6. Extra Experiment 6: Model 17, 18, and 19

Model 17 highlights that the stages of adapting the FDI screening mechanism indeed correlates to the number of stringent words at the significant of 95% level (t = 2.175; p < 0.01). Every one level moving to a more advanced stage of adapting the national FDI screening mechanism would lead to an increase of nearly 458 stringent words captured. At the significant of 90% level (t = 2.119; p < 0.05), Model 18 also illustrates the statistically significant correlation between the timing-driven adaptation and the stringency score. A 1114 points of stringency score would be measured when advancing one level in adapting the FDI policy. Model 19 presents a low statistical significance in the percentage of stringent words in the observations (t = -0.937; p > 0.1). Regarding robustness check, the R^2 values are descendingly demonstrated (Model 17: R^2 = 0.228; Model 18: R^2 = 0.219; Model 19: R^2 = 0.052), which uncovers the decreasing strengths of the findings. The explanatory powers in Model 17 and 18 stays strong in respectively explaining 22.8% and 21.9% of variance in the degree of stringency.

VI.   DISCUSSION AND CONCLUSION

6.1. Discussion

On the foundation of Down's "Cost-Benefit Analysis", this research project hypothesised two arguments in examining the correlation between the trade relation with China and the European Union countries' adaptation of their national foreign direct investment screening mechanism. However, the discussion of the result will focus on a broad scale of interpretation of results in the models, regarding the confirmation of the hypotheses and the correlation of statistical significance within the models. Apart from Experiment 1 and 6, the less focus on the changes of statistical numbers in the dependent variable is because of the relatively low explanatory powers in Experiment 2, 3, 4, and 5.

The **H1.1.** hypothesis assumed that an EU member state with higher trade dependency on China would be slower in adapting their national FDI screening mechanism. However, as Model 1 to Model 4 presented, there is no statistically significant evidence to support the H1.1. hypothesis. Nonetheless, these results still offer some highlights.

The results of Model 1 and Model 2 (Experiment 1) show the contradictions of H1.1. hypothesis. Instead of adapting the national FDI screening mechanism at a slower pace, the outcome presents that a higher trade dependency of an EU member state on China leads to a faster adaptation of national FDI screening mechanisms. (In contrast, the results in Model 3 and Model 4 (Experiment 2) confirm the argument of H1.1. hypothesis, but the strength stays quite low.) The contradictory comparisons mark that the calculation of the trade dependence index through the direct trade value indeed conceives the real value in conventional measures of international trade which affect the preciseness in comparison of the trade in value-added measurement when assessing trade relations between nations (OECD, 2021). Precisely, the selection of the TiVA measure better examines the degree of trade dependence, since the trade dependence also concerns all the participants in the global value chain of certain productions in import and export. As a result, the implementation of both values highlights the importance of examining the applied economic research with the value calculation of trade import and export.

The result of no statistically significant correlation between the explanatory and outcome variables still inspires two interesting insights to highlight the outcome. One interesting factor is other foreign investors apart from China. Although the flow of inward Chinese investment has massively flooded into the EU, the investment from Russia, the United States, and the

United Kingdom also plays an important role in the trade and investment relations with the EU (European Commission, 2021). The concern on Russian influence in the EU has influentially shaped the policy of Europe across history, particularly many cases reported regarding malign finance and doubtful economic behaviour publicly and conceivably shadowed by Moscow and Russian-affiliated enterprises (Finon & Locatelli, 2008; European Commission, 2022). The fast-paced national FDI regulation construction might originate from the concern of national security due to the tendency of overly economic dependence on Russia, particularly for the CEE EU countries (Weiner, 2018). As the introduction stated, the EU has greatly stressed the FDI policy in the past weeks due to the Russia-Ukraine conflict, which exposes the issue of Europe's dependence on Russia such as energy dependence (Finon & Locatelli, 2008; European Commission, 2022). Therefore, the current development suggests that the trade relation with Russia might be deserved to explore the correlation with the time-driven stages of national FDI screening mechanism adaptation. Apart from that, the influence of the United States and the United Kingdom as the major source countries of EU FDI investors also decisively affects the development of FDI screening mechanisms (European Commission, 2021; Ibid, 2022). For example, the U.S.-China technological competition has stressed the EU's attitude towards completing the regulatory regime and imposing greater restrictions in alignment with the U.S. (Erickson, 2021). Overall, the introduction of the FDI screening mechanism aims to secure the strategic industries and critical businesses from the possible acquisition by foreign investors. (Xueref-Poviac, 2021, p.1)

The other insight related to the non statistically significant result is the ability of administration and bureaucracy when processing policy from the EU level to the national level, commonly known as the transposition of European policy in domestic implementation (Xueref-Poviac, 2021, p.2; European Commission, 2022). Although the design of this H1.1. hypothesis aims to emphasise the timing factor, the tight timeline for adapting the mechanism may lead to a misunderstanding of the country with slower adaptation as lack of attention on the issue. Previous investigations illustrate that the interpretation and implementation by member states contribute to one-third of administrative burden in the process of EU legislation (Hauser, 2017, p.65). It is important for the EU member states to correctly transpose the EU rules in force to ensure the functionality of the single market within the transposition deadline (Hauser, 2017, p.65; European Commission, n.d.). Accordingly, from the monitoring of EU member states' transposition performances, the transposition process could also be delayed from four months

to over one year[23] (European Commission, 2020). Some member states indeed require longer terms for the transposition measures due to the institutional characteristics (Hauser, 2017, p.66), therefore, the delay in implementing the EU rules could not be interpreted as a lack of emphasis on FDI policy construction.

Despite the lack of statistical significance in H1.1. hypothesis, Model 1 to 4 still manages to highlight the statistical correlation between control variables and outcome variables. Among them, the Chinese factors are still prominent. The significant result of investment dependence on China (*idi*) correlating to the adaptation of national FDI screening mechanisms confirms the finding of Echandi et al. 's research (2018, p.6) that the hosting country tends to regulate investment and devise policies for expanding the institutional capability to attract foreign investors (Carril-Caccia et al., 2018; Ngundu et al., 2020). In addition, the significant correlation with the hosting EU country's 'Perception on BRI (*percept.bri*)' suggests that the issue of BRI is still shadowing the consideration of policymaking in the EU countries. The BRI concerns have lastingly stressed the EU with the potential debt trap ahead on partnered countries leading to deeper economic dependence on China (Garcia-Herrero et al., 2020, p.35). Therefore, further research on how the BRI factor affects the country's policy is recommended.

Moreover, the statewide characteristics also affect the adaptation of the FDI framework. The domestic economic healthiness indeed inspires the country's dedication to adapting the FDI policy as previous studies suggest (Rammal et al., 2006; Ranjpour et al., 2020; Ozekhome, 2022). 'Domestic competition' in the product market is indeed affected by international trade and investment since a lower level of competition can motivate economies to expand their trade (Bramati, Gaggero & Solomon, 2015). Due to the domestic competition development influencing the distribution of FDI in the hosting country (Barrios, Goerg & Strobl, 2004), the adaptation of FDI policy is relevant in the fact. However, the correlation needs to be further investigated due to the unclearly statistical significance (at the significant of 90% level). The fact of 'FDI restrictiveness' relevance verifies the observing state's openness to FDI, which echoes the speed of adapting FDI screening policy as the reflection of the attitude and emphasis. The relevance of 'regulatory quality' and 'governmental effectiveness' at the significant of 95% level further confirms the application of governmental capability matters in formulating

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[23] The Netherlands currently delays the transposition process for 12.8 months on average from 2017 to 2020 on the top of the EU member states, while the average value is 7.4 months late (European Commission, 2020).

policies and regulations within a given period, in line with the development of transposition EU rules among member states.

The **H1.2.** hypothesis makes the assumption that an EU member state with higher trade dependency on China would use less stringent language in their national foreign direct investment screening mechanism.' However, no statistically significant evidence supports the H1.2. hypothesis from Model 5 to Model 16 with low explanatory strength in the findings.

Since this research is an exploratory study in capturing stringency of legal documents through dictionary-based text analysis, I carried out the robustness check on Experiment 6 (Model 17, 18, and 19). The goal is not only to illustrate the relationship between the time-driven stages of adaptation of national FDI screening policy but also to test whether the method selection has successfully reflected the stringency of observations. The results of statistical significance in Experiment 6 prove the significant strength of these models (Model 17 at the significant of 95% level; Model 18 at the significant of 90% level). The text analysis indeed presents the correlation and justifies the method chosen. Interestingly, the sheer value of times of stringent words from the 'Stringency' dictionary in absolute estimation can better illustrate the relationship with the stages of adapting FDI policy than the revised value with intensity measurement included in portraying relative merit. Considering that the robustness check favours the assessment of stringency, the discussion will also highlight the nature of dictionary-based text analysis and why the correlation has been rarely perceived in the H1.2 hypothesis.

Certainly, text analysis can portray the attitude of observation within words (Tucker et al., 2021) Given the nature of analysing text, the method excludes the assessment of numbers changes, especially in policy stringency analysis (Sauter, 2014, p.1). According to Xueref-Poviac's research (2021, p.3-4), the national trends in the EU member states have tightened their foreign investment net by introducing and adjusting number-oriented regulations such as the shares of capital acquired and the numbers of transaction voting rights. The fluctuations in numbers within the regulations expect to quantify the stringent attitude in the observations (Brunel et al., 2013; Sauter, 2014). Yet, the text analysis filtered the elements of numbers out, which leaves the analysis purely on the frequency of words from dictionaries.

Furthermore, the process of robustness checks on Experiments 1 to 5 and Experiment 6 confirm the strength of the stringency measurement in dictionary-based text analysis but the low explanatory capability in bridging the impact of trade dependency on China on the adaptation

of national FDI screening policy in the EU member states. To briefly sum up, the rejection of H1.1. and H1.2. hypotheses also mark the complexity of trade relations and FDI policy, since the argument involves diverse topics. Although trade relations indeed affect countries' policies, the changes and transformation still need a detailed exploration of the dynamics and the interaction across national actors.

6.2. Conclusion and Future Research

This study aimed to analyse how the trade relation with China could affect the adaptation of the foreign direct investment screening mechanism among the European Union member states. Thus, the research extended to the following research question: "How have trade relations with China affected the European Union countries' adaptation of their national investment screening mechanism?". The legal framework regulating FDI aims to respond to the concern of economic challenges, and safeguard critical assets and national security protection since the FDI screening mechanism and its implementation has become a critical issue within the Brussels policy circle and individual member states in the past few years (European Commission, 2020). In addition, the economic-driven tension between the EU and authoritarian countries including China and Russia has greatly shown how economic dependence on trade and investment could affect the collective security, resilience, and the position of individual member states. This thesis was interested in quantitatively exploring the academic knowledge on the issues by researching the Chinese influence within the EU. Thus, through the dictionary-based text analysis, the study explored how the trade dependency on China affected the speed of adaptation and the degree of stringency in the development of national FDI screening mechanisms among the EU countries.

The thesis is majorly composed of two parts: the preliminary data generation for dictionary-based text analysis, and five experiments in two clusters for drawing correlation, respectively representing two levels of the major argument. Two experiments in the first cluster (**H1.1.**) contrasted the trade dependency on China to the timing-driven development of the EU member states' national FDI screening mechanisms. Three experiments in the second cluster (**H1.2.**) observed how the trade dependency on China influenced the stringency of legal language in the national FDI screening mechanisms via three features. At the end of the analysis, this project also ran an additional experiment as a robustness check on the validity of the dictionary-based text analysis in measuring stringency.

The results of the experiments failed to satisfy the theoretical expectations. The data analysis in Experiment 1 and 2 (**H1.1.**) demonstrated barely zero statistically significant relationships between the trade dependency on China either in the direct trade value or in the value-added measurement and the timing-based stage of adapting the national FDI screening mechanism in the EU member states. That is, the H1.1 hypothesis is rejected. The findings suggest either that the calculation of "Cost-Benefit Analysis" could not be perceived in the statistics research underlying the decision-making process of the EU countries or that there are other determinants affecting the timing of adaptation.

Nonetheless, Experiment 1 and 2 also reveal the correlations between the timing-oriented phases in adapting the FDI screening mechanism among EU member states and '*Investment Dependence Index*', '*Perception of BRI*', '*Domestic Competition*', '*FDI Restrictiveness*', '*Regulatory Quality Index*', and '*Governmental Effectiveness Index*', although the strength of the correlation becomes less in Experiment 2 than in Experiment 1. The high relevance with '*Perception of BRI*' is a solid exploration since BRI has received a high volume of attention in regulating finance since 2013. The fact with other variables is also relevant because it suggests that the significant correlations with FDI-related and the institutional characteristics correlate with the awareness and the timing in adapting the FDI screening mechanisms.

Experiment 3, 4, and 5 (**H1.2.**) presents that the trade dependency on China has no statistically significant capability in affecting the amount of stringent language used in the FDI screening legal documents. The finding suggests that the consideration of "Cost-Benefit Analysis" between positioning China-friendly policy and abiding EU rules policy is not decisively evident in framing the more stringent language of FDI screening legal documents. The exploratory Experiment 6 reaffirms the non-statistical significance resulting in the rejection of the H1.2. hypothesis is not because of the preliminary data design in measuring the stringency degree via the dictionary-based text analysis, since the timing of adapting the national FDI screening mechanism indeed significantly matters to the number of stringent words.

Hence, this study has provided findings encouraging future research concerning trade relations and the adaptation of the FDI screening mechanism within the EU countries. Particularly, this research is an exploratory research, where future research could further dig into the field. Certainly, the limitations left in the research are expected to be remedied by future research.

Future researchers interested in the relationship between trade relations and FDI policy should continuously track the development of FDI policy in EU member states. The FDI policy among the EU member states will keep advancing in the future since the policy needs to keep updated in response to the upcoming challenges nowadays, such as the financial flows from Russia, China, and other foreign investors, technology governance on e-commerce, Fintech, and environmental regulations (Schwab, 2019; Xueref-Poviac, 2021). The thesis research only analyses the observations under a tight implementation time for EU member states, where one-third are still in the process of amending the framework in their national regulations. The small-N samples (symbolised 18 member states) limit the validity of the findings. Nonetheless, the limitation still provides findings with fruitful insights even under such a short period for observing the trend.

In addition, the findings of extremely low statistical difference in the research also reveal weak evidence in support of the calculation of "Cost-Benefit Analysis" behind. Several domestic disputes within individual EU member states indeed arise from the debate on pro-China collaboration next to abiding EU's common market rules and values (Brînză, 2020; Vou, 2021; Koleszar, 2021). Moreover, the control variables concerning 'investment dependence on China' and 'Perception on China' also confirm the shadow of greater Chinese influence behind the consideration of the EU. Hence, additional research is suggested to analyse how the cost-benefit calculation affects the policy decision-making process within individual member states. Apart from Chinese factors, the characteristics of the state also deserve to be further explored and the correlation with the adaptation of FDI policy among EU member states.

Further research on policy stringency analysis is recommended to systematically measure the stringency via conducting text analysis and creating stringency indicators. The applied economic research still requires widely accepted stringency indicators (Sauter, 2014). Particularly, the FDI policy stringency indicator should also be designed with quantifying common qualifications regulating foreign investors such as the percentage of foreign shares and the reporting months (Xueref-Poviac, 2021). Ideally, a unified FDI policy indicator expects to develop a general methodology in reflecting the policy stringency across nations.

Hence, the research's findings and the suggestions for future research are encouraging to enlighten the understanding of how the trade relation with China affects the adaptation of the

EU member states' national FDI screening mechanism. The most important is to interpret and secure how the EU and its member states should guard the values, independence, and solidarity regardless of the Chinese influence next to the unbreakably strong economic relations with China.

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APPENDIX

Table 7. Words in the dictionaries of 'Stringency' and 'Degree'

Dictionary (Magnitude of words)	Words
Stringency (2)	abundant accept acceptable accepting accomplish accomplished accomplishes accomplishing accomplishment accomplishments accuracy accurate accurately achieve achieved achievement achievements achieves achieving acumen adapt adaptive adequacy adequate adequately advance advancement advancements advances advancing advantage advantaged advantageous advantageously advantages advisability advisable advising affluence afford affordable afforded affords alliance alliances allow allowable allowing appropriate assurance assurances assure assured attain attainable attained attaining attainment attract attracting attractive attractiveness balance balanced balancing beat

	beneficial beneficially benefit benefited benefiting benefits benefitted benefitting best better boom booming boost breakthrough breakthroughs capability capable care careful carefully charitable class classy clean collaborate collaborates collaboration collaborative comfort comfortable compatibility compatible competence competent compliment complimentary complimenting concluding conclusion conclusive concurrence concurrent confidence confident consistency consistent construction constructive constructively convenience convenient correct correctly correctness creative creativity defense defensible dependable desirability desirable desire desired desires devote devoted diligence diligent distinct distinction distinctive durability durable dynamic earn earning earnings easier easily easy effect effective effectively efficiencies efficiency efficient efficiently elevate elevating empower empowered empowers enable enabled enables enabling encourage encouraged encourages encouraging endure enduring enhance enhanced enhancement enhancements enhances enhancing enjoy enjoyed enjoying enjoys equit equitable ethical ethically ethics excel excellence excellent excelling exception exceptional exceptionally excited exciting exemplary favor favorable favorably favored favoring favorite flexibility flexible friendly functional functionality gain gained gaining gains generous goal good great greater greatest greatly grounded grown growth guarantee guardian harmonization harmonize healthy highest honor honoring ideal ideally improve improved improvement improvements improves improving incentive influential innovate innovating innovation innovations innovative innovators insure insured integral integrity intelligence intelligent intelligently invent inventing inventions knowledgeable leadership leading legitimate liquid liquidity loyal loyalty lucrative luxury manageable master mature maximize meaningful meaningfully mitigate mitigation monitor opportune opportunistic opportunistically opportunities opportunity optimal optimism optimistic optimization optimize outperform outperformed outperforming outperforms outstanding overcome parity patience payoff perfect perfectly perform pinnacle positive positively powerful practical precision preferable preferential premier preparedness preserve prime proactive proactively productive proficiency profit profitability profitable profitably profiting progress progressing prominent promised proper prosperity prudent prudently qualified quality realistic realize reasonably rebound rebounded rebounding receptive rectify regain regained regaining reliable reliably representative resilient resolve return

revenue reward rewarded rewarding rewards rich riskless robustness safeguard safeguards satisfaction satisfactory satisfied satisfies satisfy satisfying secure secured secures selectively skill skilled skills smart smooth solid solving sophisticated sophistication sound soundness specialist stability stabilization stabilize stabilizing stable strategic strategically strength strengthen strengthened strengthening strengthens strengths strong stronger strongest succeed succeeded succeeding succeeds success successes successful successfully suitability suitable superior supreme surpass surpassed surpasses surpassing surplus survive sustainable sustainably talent talented thoughtful thoughtfully timeliness touchstone transparency transparent turnaround unbiased unconditional unconditionally upside upswing uptrend upturn upturns upward upwards useful valid validity valuable versatility vibrant vigor vigorous vigorously virtue visionary warranty win winner winners winning wins wisely worthy no action no-action adjudicated allegations allege antitrust attorney bankrupt bankruptcies bankruptcy bribery claim claimant claimants claimed claiming claims codification collateral compel compelled compulsory condemnation constitution constitutional contested matters contract contracted contractholders contracting contracts contractual contractually counsel counsels counterclaims court courts crime crimes criminal criminalizing cybercrime defraud disgorge disinterested dodd frank embargo embargoes encumbrances expropriate expropriation facto fide foreclose foreclosed foreclosure fraud fraudulent government grantor hazard hazardous illegal indemnification indemnify injunction injunctions insolvency insolvent intervention involuntarily involuntary irrevocable irrevocably judicial jurisdiction jurisdictional jurisdictions law lawfully laws lawsuit lawsuits legal legalized legalizes legally legislation legislations legislative legislator legislators legislature legislatures liability lien liquidate liquidated liquidates liquidating liquidation liquidations litigating litigation malpractice mandate mandated mandates mandatory misrepresentation monopoly nationalization obligor obligors pari passu penalties penalty perjury prohibit prohibited prohibiting prohibition prohibitions prohibitively prohibits proxy contest rebuttable referendum regulate regulated regulates regulating regulation regulations regulator regulators regulatory remand remediation renegotiation repossessed rescind rescinded rescinding rescission revocation revoke revoked ruled ruling rulings sanction sanctions scrutiny statute statutes statutory sue tariff tariffs tax taxed taxes terminate terminated terminates terminating

	termination unconstitutional unenforceable unlawful usury voided
Degree (0.25)	close currently decrease decreases decreasing discrete early fair fairly few general gradual gradually imperfect imperfectly incremental infrequent infrequently insignificant junior lastly least likelihood likely lowest mere merely minimum minor modest modestly narrow narrower narrowly nascent nominal normally only ordinary outside partial particularly prior rare rarely reduced reduction relaxed remote roughly seldom slight slightly sporadic sporadically subtle thin thinly uniform uniformly weakly well able appear appeared appearing appears can could depend depended depending depends may maybe must seem seems should suggest tends will would
Degree (0.5)	appropriately beginning broadly current
Degree (0.75)	above acutely additional adequate adequately average below better big bigger cautious central centrally closely commonly conditional conditionally considerable considerably considered consistent consistently continually continuous critical degree depressed disproportional disproportionate disproportionately down dropping emphasis enough especially extra falling far farther fast faster frequency fuller generally good great greater hard harder high higher imminent importance increase increased increases increasingly intermediate large largely lasting less lesser lessor lighter little long longer low lower lowering mainly many medium moderate moderately more much near nearly normal numerous occasionally ordinarily original over overall overly preferred prevalence properly proportionately readily reasonable recently regular regularly repeatedly rising same satisfactory satisfying select selective selectively sensitive short shorter shortly shrinking similar similarly sizable smaller some sometime sometimes somewhat special specific specifically steadily steady substantive sufficiency sufficient sufficiently surge thinner thorough throughout tighten timely under unevenly unique uniquely unlike unprecedented up upper upwardly upwards usually wholly widely widen widespread mitigate ought suggested suggesting tend tending
Degree (1.25)	accelerate accelerated accelerating advanced almost always ample amplified amplify arbitrarily augment best beyond biggest bold bottom clearly complete completely comprehensive comprehensively deep definitely dominance dominant dramatic dramatically elevated elevating entirely entirety essential essentially every exact exactly exceed exceeding excess exclusive

	exclusively exponential extensive extensively extraordinarily extraordinary extreme extremely favorite firmly frequent frequently fully greatest greatly gross guaranty heavily heavy heightened highest highly huge hyper immediate immediately important importantly inordinately intense intensely intensify last magnification magnify magnitude material materially maximum most mostly nearest necessary negatively often outstanding persistently popular popularity precious precipitous precisely predominant predominantly prevalent primarily prime principal pronounced quickly rapid rapidity rapidly rigorous rigorously seismic serious seriously severe severely severity sharp sharper sharply significance significant significantly specialized steep steeper strongly substantial substantially sudden suddenly super tightly top total tremendous ultra vast very voluminous might suggests