Ecole Doctorale des Sciences Economiques, Juridiques, Politiques et de gestion
Centre d'Etudes et de Recherche sur le Développement International (CERDI)

Université Clermont Auvergne, CNRS, IRD, CERDI, F-63000 Clermont-Ferrand, France

Geopolitical Distance and International Economic Relations: An Analysis of Bilateral Trade, Development Aid, and Chinese Foreign Direct Investment

Thèse présentée et soutenue publiquement le 11 Juin 2025
pour l'obtention du titre de Docteur en Sciences Economiques

par

Ismaël OUEDRAOGO

sous la direction de

Mary-Françoise RENARD

Membres du Jury

Antonio SAVOIA	Professeur, Université de Manchester, Royaume-Uni	Rapporteur
Catherine BROS	Professeur, Université de Tours, LEO, France	Rapporteure
Gilles DUFRENOT	Professeur, Aix Marseille Université, AMSE, France	Suffragant
Mary-Françoise RENARD	Professeur émérite, Université Clermont Auvergne, CERDI, France	Directrice de thèse

DEDICACES

L'université Clermont Auvergne n'entend donner aucune approbation ni improbation aux opinions émises dans cette thèse. Ces opinions doivent être considérées comme propres à leur auteur.

DEDICACES

À ma mère, Fatoumata MAIGA,
Ce travail est une offrande du cœur, dédiée à toi, ma lumière constante. Ton amour inconditionnel, ta force tranquille et ta sagesse sans âge ont été ma boussole dans les moments d'incertitude, et mon ancrage dans les tempêtes. Tu as veillé, soutenu, prié, conseillé… sans jamais compter. Ton dévouement silencieux m'a porté plus loin que je n'aurais osé rêver. Chaque mot de cette thèse porte l'empreinte de tes sacrifices et de ta foi inébranlable en moi. Que ce modeste aboutissement soit un hommage à la femme exceptionnelle que tu es. Avec tout mon amour, et une gratitude infinie.

À mon père, Mahamadi OUEDRAOGO,
Tu es parti juste après mon arrivée en France, comme si ton ultime acte de courage avait été de m'ouvrir la voie avant de t'effacer. Ton départ m'a laissé un vide immense, mais aussi une mission silencieuse : continuer, persévérer, et réussir. Même si tu n'es plus là pour voir ce travail aboutir, je sens ta présence à chaque étape, comme une force invisible qui me pousse à me dépasser. Ce travail est dédié à toi, mon guide invisible, mon héros silencieux. J'espère de tout cœur t'avoir rendu fier, là où tu es.

À ma directrice de thèse, Mary-Françoise RENARD,
Ce travail porte la marque de votre rigueur, de votre exigence et de votre bienveillance. Vous avez su me guider sans jamais imposer, me corriger sans jamais décourager, et m'encourager sans jamais relâcher l'effort. Votre accompagnement a transformé cette thèse en un véritable cheminement intellectuel, mais aussi humain. Merci pour votre disponibilité, votre patience, et pour avoir cru en ce projet. Cette thèse vous est dédiée, en reconnaissance de tout ce que vous avez semé sur mon parcours.

Enfin, à ma famille,
À mes frères et sœurs : Sarata, Adiaratou, Alimata, Cader, ainsi qu'à mes neveux et nièces : Irfan, Abdel, Camille, Gloria, Nolan, Andy, Angela, Melvina, Prince, Arielle.
Merci d'avoir été là, tout simplement. Dans les silences partagés comme dans les éclats de rire, dans les appels brefs mais essentiels, dans vos encouragements discrets mais puissants. Vous avez été ma source de réconfort, mon énergie cachée. Ce travail est aussi le vôtre.

REMERCIEMENTS

La réalisation de cette thèse n'aurait jamais été possible sans le soutien indéfectible, l'accompagnement bienveillant et les conseils éclairés de nombreuses personnes. À chacune et chacun d'entre vous, je souhaite exprimer ici toute ma gratitude.

Je tiens tout d'abord à adresser mes remerciements les plus sincères à ma directrice de thèse, la Professeure Mary-Françoise Renard. Son encadrement rigoureux, sa disponibilité constante, et la confiance qu'elle m'a témoignée tout au long de ces années ont été essentiels dans la construction et l'aboutissement de ce travail. Ses remarques précises, sa vision stratégique et ses encouragements m'ont non seulement aidé à progresser dans mes recherches, mais m'ont aussi inspiré sur le plan personnel. Merci pour votre exigence, votre humanité, et votre regard lucide qui m'ont tant apporté.

Je suis profondément reconnaissant aux membres du jury Antonio Savoia, Catherine Bros et Gilles Dufrénot d'avoir accepté d'évaluer ce manuscrit. L'attention que vous avez portée à mon travail et la richesse de vos remarques me touchent sincèrement. Vos contributions me permettront, j'en suis convaincu, d'aller plus loin dans mes recherches futures.

Je remercie également chaleureusement les membres de mon comité de suivi, Mme Pascale Combes et M. Sébastien Marchand, pour leur écoute toujours attentive, leurs suggestions précieuses et leur soutien régulier tout au long du processus doctoral. Votre regard critique m'a été très bénéfique.

Je n'oublie pas les collègues et amies de la scolarité centrale, Caroline Bregegere, Armelle Chouzenoux, Sandrine Bertrand, ainsi qu'Hélène Saint-André, dont le professionnalisme, la gentillesse et la bienveillance ont rendu mes missions étudiantes particulièrement enrichissantes. Merci aussi à l'équipe de la scolarité de l'École d'Économie Anaelle Nigon, Flora Davis, Hassen Bahloul et Soline Bonhomme pour ces moments de partage et d'entraide qui m'ont beaucoup marqué.

À mon cher ami et compagnon de route Nana Ibrahim, je veux dire un merci tout particulier. Depuis mon arrivée en France en 2016, ton amitié fidèle, ta sagesse et ta générosité m'ont accompagné comme une lumière discrète mais constante. J'ai tant appris à tes côtés. Merci d'avoir toujours été là, dans les hauts comme dans les creux.

À tous ceux qui ont rythmé ces années de thèse par des instants de joie, de légèreté et de complicité lors de pauses café, de déjeuners improvisés, de soirées animées, de barbecues endiablés ou de simples discussions qui aèrent l'esprit, je vous suis infiniment reconnaissant. Merci à Nestor Woba, Lompo, Achille, Aristide, Zerbo, Edouard, le doyen Obossou, Nestor (encore un !), Macoura, Denera, Elie, Bao-We-Wal, Chantal, Henri, Naimatou, Aimé Okoko, Perin, Nourath… pour les rires, le soutien, et la chaleur de vos présences. Vous êtes des piliers, des repères, des amis inestimables.

Mes pensées reconnaissantes vont également à toute l'équipe pédagogique du CERDI. Merci pour la qualité de votre enseignement, vos retours toujours constructifs, et pour avoir su créer un environnement intellectuel aussi stimulant que bienveillant. Merci aussi au personnel administratif, et en particulier à Martine Bouchut, Chantal Brige, Marie Dussol et Johan Guiot, pour votre disponibilité, votre efficacité et votre bonne humeur au quotidien.

Je souhaite remercier Marie-Eliette Dury et Sébastien Marchand pour leur confiance renouvelée lors de mes activités d'enseignement. J'ai eu la chance de transmettre mes connaissances à travers les TD de probabilités, statistiques inférentielles, macroéconomie, mais aussi des CM en économie du travail et en économie internationale. Ces expériences m'ont permis de grandir, humainement autant que professionnellement.

REMERCIEMENTS

RÉSUMÉ

Cette thèse explore l'impact des dynamiques géopolitiques sur les relations économiques internationales, en se focalisant sur trois dimensions essentielles : le commerce bilatéral, l'aide publique au développement (APD) et les investissements directs étrangers (IDE). Dans un contexte mondial marqué par des rivalités croissantes entre grandes puissances, l'objectif principal de cette recherche est de comprendre comment la distance géopolitique influence les flux économiques, l'allocation de l'aide et les décisions d'investissement. En intégrant cette variable géopolitique dans des modèles économiques classiques, la thèse propose une approche nouvelle et plus complète pour analyser les relations économiques internationales.

Le premier volet de l'étude s'intéresse à l'influence de la distance géopolitique sur le commerce bilatéral. Traditionnellement, les modèles gravitaires expliquent les flux commerciaux en fonction de la distance physique et de la taille des économies. Cependant, cette recherche élargit ce cadre en incluant des mesures de distance géopolitique, basées sur l'alignement des votes à l'ONU et d'autres indicateurs d'affinité politique. Les résultats montrent que la proximité géopolitique favorise significativement les échanges commerciaux, en particulier dans les secteurs stratégiques tels que l'énergie et les ressources naturelles, alors que des tensions géopolitiques importantes réduisent ces flux. Ainsi, au-delà de la distance physique, la distance géopolitique devient un déterminant clé dans les décisions commerciales entre nations.

Le deuxième volet de la thèse examine comment les considérations géopolitiques influencent l'allocation de l'APD par les pays membres du Comité d'Aide au Développement (CAD) de l'OCDE. L'aide publique au développement, bien qu'ayant pour vocation première de soutenir les pays en difficulté, apparaît également comme un outil de projection de l'influence géopolitique des donateurs. L'analyse empirique montre que les pays alignés géopolitiquement avec les donateurs reçoivent des volumes d'aide plus élevés. Ce constat met en lumière que l'APD n'est pas seulement orientée par des objectifs humanitaires, mais qu'elle est aussi un instrument stratégique dans la construction et le renforcement des alliances internationales. Les canaux d'aide non-gouvernementaux, tels que les ONG, jouent un rôle essentiel dans cette dynamique, favorisant une distribution plus ciblée de l'aide.

Le troisième volet de la thèse examine comment les IDE de la Chine sont influencés par la distance géopolitique. En analysant des données de 132 pays de 1990 à 2021, cette étude montre que la Chine privilégie les pays avec lesquels elle partage une proximité géopolitique, en particulier pour des investissements de grande envergure. En revanche, pour des investissements de plus faible ampleur, la Chine se montre plus flexible et continue de diversifier ses engagements dans des régions politiquement plus éloignées, notamment en Afrique et en Amérique latine. Grâce à une approche économétrique combinant régressions à effets fixes et régressions quantiles, les résultats révèlent l'évolution de la stratégie chinoise, particulièrement sous l'influence de l'initiative Belt and Road, qui vise à consolider son influence dans les régions du Sud global. Cette section illustre ainsi comment les IDE chinois servent non seulement à stimuler le développement économique mais également à étendre l'influence géopolitique de la Chine à l'échelle mondiale.

Mots clés : Géopolitique, Distance géopolitique, Commerce bilatéral, Aide publique au développement (APD), Investissements directs étrangers (IDE), Belt and Road Initiative (BRI), Régression quantile, Poisson Pseudo-Maximum de Vraisemblance (PPML).

Codes JEL : F51, F53, F14, F35, F21, O19, C23, D74.

SUMMARY

This thesis explores the impact of geopolitical dynamics on international economic relations, focusing on three key dimensions: bilateral trade, official development assistance (ODA), and foreign direct investment (FDI), particularly within the framework of China's Belt and Road Initiative (BRI). In a global context marked by increasing rivalries among major powers, the primary objective of this research is to understand how geopolitical distance influences economic flows, aid allocation, and investment decisions. By incorporating geopolitical factors into traditional economic models, this thesis offers a more comprehensive approach to analyzing international economic relations.

The first section of the study investigates the influence of geopolitical distance on bilateral trade. Traditional gravity models explain trade flows based on physical distance and the size of economies. However, this research expands the model by integrating geopolitical distance measures, which are derived from UN voting alignment and other political affinity indicators. The results show that geopolitical proximity significantly enhances trade flows, particularly in strategic sectors such as energy and natural resources, whereas significant geopolitical tensions reduce trade. Thus, geopolitical distance, in addition to physical distance, emerges as a critical determinant in shaping trade decisions between nations.

The second section of the thesis examines how geopolitical considerations shape the allocation of ODA by member countries of the OECD Development Assistance Committee (DAC). Although development aid is primarily intended to support countries in need, it also serves as a tool for projecting the geopolitical influence of donor countries. Empirical analysis reveals that countries with closer geopolitical alignment to donors receive higher volumes of aid. This finding highlights that ODA is not solely driven by humanitarian goals but also functions as a strategic instrument for building and strengthening international alliances. Non-governmental channels, such as NGOs, play a crucial role in this dynamic, enabling a more targeted distribution of aid.

The third section of this thesis examines how China's foreign direct investments (FDI) are influenced by geopolitical distance. Analyzing data from 132 countries between 1990 and 2021, this study reveals that China favors investment in countries with which it shares geopolitical proximity, particularly for large-scale investments in strategic sectors like infrastructure and natural resources. Conversely, for smaller investments, China shows greater flexibility, diversifying its engagements in politically distant regions, especially in Africa and Latin America. Through an econometric approach combining fixed-effects and quantile regressions, the results reveal China's evolving strategy, notably under the influence of the Belt and Road Initiative, which aims to strengthen its influence in the Global South. This section thus demonstrates how Chinese FDI serves not only to boost economic development but also to extend China's geopolitical influence on a global scale.

Key words : Geopolitics, Geopolitical distance, Bilateral trade, Official Development Assistance (ODA), Foreign Direct Investment (FDI), Belt and Road Initiative (BRI), Quantile regression, Poisson Pseudo-Maximum Likelihood (PPML).

JEL Codes : F51, F53, F14, F35, F21, O19, C23, D74.

Contents

Contents

List of Figures

Liste of Tables

Chapter 1: Introduction générale

1.1 Contexte mondial et justification

Le contexte mondial actuel est marqué par des bouleversements géopolitiques et économiques qui transforment en profondeur les relations internationales. Depuis le début du XXIe siècle, le monde assiste à une montée des rivalités entre grandes puissances, comme les États-Unis, la Chine et la Russie, chacune cherchant à renforcer son influence dans un ordre mondial de plus en plus fragmenté. Les États-Unis, longtemps perçus comme la puissance hégémonique incontestée, font face à des défis croissants de la part de la Chine, dont la montée en puissance économique et militaire modifie les équilibres mondiaux. Cette rivalité s'est cristallisée dans la guerre commerciale entre les deux nations, marquée par des hausses de tarifs douaniers et des mesures protectionnistes, qui ont perturbé les échanges commerciaux et les chaînes de valeur mondiales (Kwan, 2020; Zreik, 2020).

Par ailleurs, la Russie, malgré une position économique relativement affaiblie par rapport aux autres grandes puissances, continue de jouer un rôle stratégique clé. Les sanctions économiques imposées à la Russie après l'annexion de la Crimée en 2014, et plus récemment après l'invasion de l'Ukraine en 2022, ont eu des conséquences majeures sur le commerce international et les flux financiers mondiaux. Ces sanctions ont poussé la Russie à réorienter ses échanges économiques vers d'autres partenaires, notamment en Asie, tout en renforçant ses liens avec des puissances telles que la Chine. Cette réorganisation des alliances économiques met en lumière l'impact crucial des décisions géopolitiques sur les dynamiques économiques globales.

En outre, la pandémie de COVID-19 a exacerbé ces tensions en bouleversant les systèmes de production mondiaux. Les restrictions aux frontières, les perturbations des chaînes d'approvisionnement, ainsi que les mesures protectionnistes prises par certains États pour protéger leurs économies, ont créé un climat d'incertitude et amplifié les rivalités entre nations. L'exemple de la course aux vaccins et des tensions autour de la distribution des équipements médicaux montre comment la pandémie a accentué la compétition entre les États, à la fois sur le plan économique et géopolitique. De plus, la pandémie a aussi révélé des vulnérabilités dans la mondialisation, poussant plusieurs pays à revoir leurs dépendances stratégiques et à renforcer leurs capacités locales, contribuant ainsi à une tendance vers une démondialisation partielle.

Ces changements structurels s'inscrivent dans un contexte plus large de montée des populismes et du nationalisme économique dans plusieurs pays, notamment en Europe et en Amérique du Nord. La sortie du

Royaume-Uni de l'Union européenne (Brexit) en 2020 et les tensions internes à l'UE concernant les politiques commerciales et migratoire reflètent une montée du protectionnisme et de la réaffirmation des souverainetés nationales. Cela contraste avec les décennies précédentes, durant lesquelles la libéralisation des échanges et l'intégration économique régionale semblaient irréversibles. Désormais, la géopolitique se réinvite dans les relations commerciales, et les décisions économiques sont de plus en plus soumises à des calculs stratégiques plutôt qu'à de simples considérations d'efficacité économique (M. S. Aiyar et al., 2023).

Dans cette nouvelle configuration mondiale, les flux économiques internationaux (qu'il s'agisse des échanges commerciaux, des investissements directs étrangers (IDE) ou de l'aide publique au développement) sont de plus en plus affectés par les relations géopolitiques entre les États. Longtemps perçue par certains comme un processus linéaire et détaché des considérations politiques, la mondialisation a cependant révélé ses limites face à des enjeux géostratégiques de plus en plus complexes. Des exemples historiques, tels que les rivalités économiques durant la Guerre froide, illustrent que la mondialisation a toujours été influencée par des dynamiques politiques et stratégiques. La fragmentation des chaînes de valeur mondiales, la reconfiguration des alliances économiques et les tensions géopolitiques exacerbées par des crises internationales montrent que la dimension géopolitique est devenue incontournable pour analyser les relations économiques internationales (Chor, 2023).

Les IDE, longtemps perçus principalement sous l'angle des opportunités de marché et des rendements économiques, semblent aujourd'hui jouer un rôle de plus en plus important en tant qu'instruments géopolitiques. La Chine, à travers la Belt and Road Initiative (BRI), est souvent citée comme un exemple notable de cette évolution. À travers des projets d'infrastructures d'envergure, la Chine semble viser non seulement à stimuler la croissance économique de ses partenaires, mais également à renforcer son influence géopolitique en établissant des alliances stratégiques et en garantissant un accès privilégié aux ressources naturelles nécessaires à son économie (Huang, 2016). Les IDE, en particulier dans des secteurs critiques comme les ports, les routes et les réseaux de communication, sont ainsi perçus par certains comme des leviers de soft power (Nye, 1990), permettant aux pays investisseurs de consolider leur position dans des régions géopolitiquement sensibles.

Cependant, cette utilisation des IDE comme outil géopolitique mérite d'être examinée plus en profondeur. Il est essentiel de se demander dans quelle mesure ces investissements sont motivés par des objectifs purement économiques, ou s'ils servent effectivement à renforcer l'influence stratégique des puissances émergentes. Cette thèse propose d'analyser ce phénomène en détail, en s'appuyant sur des données empiriques pour déterminer le poids des considérations géopolitiques dans les décisions d'investissement étranger, notamment dans le cadre des projets chinois.

De la même manière, loin d'être uniquement humanitaire, l'aide publique au développement (APD) peut répondre à des objectifs stratégiques, renforçant parfois les alliances géopolitiques des pays donateurs. Par exemple, l'aide américaine à l'Égypte, substantiellement augmentée après les accords de Camp David, paraît répondre à des considérations de stabilité régionale et de maintien d'une relation stratégique avec ce pays du Moyen-Orient (McKinley & Little, 1979). De même, l'Union européenne, par le biais de ses programmes d'aide, tente de favoriser l'intégration des pays des Balkans tout en limitant l'influence de la Russie dans cette région.

Néanmoins, il est pertinent de se poser la question de savoir dans quelle mesure ces dynamiques sont omniprésentes et si l'APD, dans sa globalité, est systématiquement orientée par des motivations géopolitiques. L'analyse de cette question est l'un des objets de cette thèse, qui vise à explorer les conditions et les canaux par lesquels l'aide au développement pourrait être influencée par des intérêts géopolitiques, tout en tenant compte des contextes variés et des spécificités des relations entre pays donateurs et récipiendaires. Le commerce bilatéral, quant à lui, est souvent l'un des premiers domaines où les effets de la géopolitique se manifestent. Les sanctions commerciales, les guerres tarifaires et les accords bilatéraux sont autant de mécanismes par lesquels les relations économiques sont ajustées en fonction des réalités géopolitiques. La guerre commerciale entre les États-Unis et la Chine en est un exemple éloquent. Ce conflit a non seulement perturbé les flux commerciaux entre les deux plus grandes économies mondiales, mais a aussi poussé chaque pays à diversifier ses partenaires commerciaux, redéfinissant ainsi la carte des échanges internationaux.

Dans ce cadre, la géopolitique, qui étudie l'influence des facteurs géographiques, politiques et stratégiques sur les relations entre les nations (Dodds, 2014; Flint, 2021; Nye, 1990), devient un outil indispensable pour comprendre les flux économiques internationaux. Les modèles économiques traditionnels, comme les modèles gravitaires du commerce, se sont longtemps concentrés sur des variables comme la distance physique et la taille des économies. Cependant, les événements récents montrent que ces modèles sont insuffisants pour expliquer la complexité des interactions économiques actuelles. Il est désormais nécessaire de prendre en compte la distance géopolitique (Bailey et al., 2017), qui englobe les divergences politiques, idéologiques et diplomatiques, pour comprendre pleinement la dynamique des flux économiques internationaux.

1.2   Problématique et cadre conceptuel

Cette thèse se propose d'examiner l'impact de la distance géopolitique sur trois dimensions essentielles des relations économiques internationales : le commerce bilatéral, l'APD et les investissements directs étrangers.

La question centrale de cette recherche est la suivante : comment les relations géopolitiques influencent-elles les flux économiques internationaux ?

Les modèles économiques traditionnels, notamment le modèle gravitaire utilisé pour expliquer les flux commerciaux, reposent sur l'idée que la distance physique et la taille des économies déterminent l'intensité des échanges entre deux pays. Toutefois, ces modèles ne tiennent pas compte de l'influence croissante des relations géopolitiques. Or, dans un contexte mondial de plus en plus polarisé, la distance géopolitique est devenue un facteur clé, capable de moduler les décisions économiques des États. Par exemple, des pays proches sur le plan géographique, comme la Corée du Nord et la Corée du Sud, peuvent entretenir des relations économiques très limitées en raison de leurs divergences idéologiques, tandis que la Corée du Sud est plus économiquement liée aux États-Unis.

Ainsi, la distance géopolitique constitue un ajout crucial à l'analyse traditionnelle des relations économiques. Elle permet d'expliquer des phénomènes qui échappent aux seuls modèles basés sur la proximité physique, notamment en identifiant comment les rivalités politiques ou les alliances stratégiques influencent les flux commerciaux, les décisions d'investissement ou l'allocation de l'aide au développement. Intégrer cette dimension géopolitique dans l'analyse permet de mieux comprendre comment les États ajustent leurs décisions économiques en fonction de leurs intérêts politiques et diplomatiques.

1.3 Objectifs et contribution de la thèse

Le **premier objectif** est d'examiner l'impact des tensions géopolitiques sur le commerce bilatéral. Par exemple, la guerre commerciale entre les États-Unis et la Chine a mis en lumière la manière dont les considérations politiques et stratégiques peuvent réduire ou rediriger les flux commerciaux entre deux puissances économiques majeures. Cette thèse montre que la distance géopolitique entre deux nations peut modérer ou amplifier les effets des échanges économiques, même dans un contexte de mondialisation avancée.

Le **deuxième objectif** est de démontrer comment l'APD peut être influencée par des objectifs géopolitiques. Loin d'être purement humanitaire, l'allocation de l'aide internationale peut servir des fins stratégiques, permettant aux pays donateurs de renforcer leurs alliances politiques. Par exemple, l'aide américaine en Amérique centrale, à travers des initiatives telles que l'Alliance pour la Prospérité, vise à renforcer la sécurité régionale et à réduire les flux migratoires vers les États-Unis, tout en consolidant les relations stratégiques avec les pays de la région (Meyer, 2019).

Enfin, le **troisième objectif** est d'analyser le rôle des IDE dans la projection d'influence géopolitique, en particulier dans le cadre de l'initiative chinoise de la Belt and Road Initiative. Les investissements chinois dans les infrastructures en Afrique et en Asie témoignent d'une volonté de renforcer des alliances stratégiques, tout en garantissant l'accès à des ressources critiques. Cette thèse démontre que les IDE ne sont pas seulement motivés par des considérations économiques, mais servent également des objectifs de soft power (Nye, 1990), permettant à la Chine d'étendre son influence mondiale.

1.4 Organisation et structure analytique de la thèse

Cette thèse est articulée autour de trois chapitres principaux, qui examinent chacun un aspect distinct de l'influence de la distance géopolitique sur les relations économiques internationales. À travers une analyse rigoureuse, chaque chapitre adopte une approche empirique pour explorer comment la géopolitique façonne le commerce, l'APD, et les IDE, en s'appuyant sur des modèles économétriques sophistiqués.

1.4.1 Impact de la distance géopolitique sur le commerce bilatéral

Le premier chapitre explore l'impact de la distance géopolitique sur les flux commerciaux bilatéraux, en particulier dans des secteurs stratégiques tels que l'énergie, les ressources naturelles et les biens de haute technologie. Traditionnellement, les flux commerciaux sont expliqués par des modèles gravitaires qui prennent en compte la distance physique, la taille des économies, et d'autres facteurs économiques. Cependant, ce chapitre enrichit ces modèles en introduisant la notion de distance géopolitique, mesurée par l'alignement des votes à l'ONU (Bailey et al., 2017; Voeten et al., 2023) et d'autres indicateurs d'affinité politique et diplomatique. L'analyse repose sur un modèle gravitaire élargi, estimé à l'aide de la méthode de Poisson Pseudo-Maximum Likelihood (PPML), permettant de traiter les flux commerciaux nuls et de corriger l'hétéroscédasticité des données. Les résultats révèlent que la proximité géopolitique favorise les échanges commerciaux, tandis que des tensions géopolitiques importantes réduisent ces flux, même après avoir contrôlé pour la distance physique. Cet effet est particulièrement marqué dans les secteurs stratégiques, où les relations politiques jouent un rôle essentiel pour maintenir des échanges stables et sécurisés. Ce chapitre démontre donc que la distance géopolitique est un facteur clé influençant les décisions commerciales des États, au-delà des simples considérations géographiques ou économiques.

1.4.2 Influence de la géopolitique sur l'allocation de l'aide publique au développement

Ce chapitre se concentre sur l'APD des membres du CAD de l'OCDE, analysant comment la distance géopolitique façonne l'allocation de cette aide, au-delà des motivations humanitaires. Bien que l'APD soit traditionnellement perçue comme un outil de solidarité internationale, ce chapitre examine dans quelle mesure elle peut aussi être utilisée comme un instrument de projection d'influence géopolitique. L'analyse repose sur un modèle de panel à effets fixes couvrant la période 2002-2021, qui permet de capturer l'évolution des flux d'aide en fonction des contextes géopolitiques majeurs, notamment après des crises internationales ou des événements géostratégiques. En distinguant les différents canaux de distribution de l'aide (gouvernementaux, non-gouvernementaux, multilatéraux), l'étude montre que les pays géopolitiquement alignés avec les donateurs reçoivent des volumes d'aide plus élevés, en particulier via des canaux non-gouvernementaux tels que les ONG. Ce chapitre met ainsi en lumière le rôle stratégique que l'APD peut jouer dans la construction d'alliances internationales et démontre que l'allocation de l'aide ne repose pas uniquement sur les besoins humanitaires des pays récipiendaires, mais est aussi façonnée par des objectifs géopolitiques.

1.4.3 Géopolitique et investissements directs étrangers chinois

Le troisième chapitre se concentre sur l'analyse des IDE chinois. La Chine étant devenue un acteur incontournable des flux d'IDE, particulièrement dans les pays en développement, ce chapitre explore comment ces investissements sont influencés par des considérations géopolitiques. L'analyse repose sur un modèle de régression en panel avec effets fixes et quantiles, qui permet d'examiner la relation entre la distance géopolitique et les décisions d'investissement chinois, en prenant en compte les spécificités des pays récipiendaires. L'étude couvre la période de 1990 à 2021 et se concentre sur 132 pays, en mettant l'accent sur les secteurs stratégiques tels que les infrastructures de transport, les ports et les ressources naturelles. Les résultats montrent que la proximité géopolitique avec la Chine est un facteur déterminant pour attirer des IDE, notamment pour les grands projets d'infrastructure dans les secteurs critiques. Les investissements chinois sont particulièrement concentrés dans des pays qui partagent des affinités géopolitiques avec la Chine, ce qui reflète une volonté claire de renforcer les alliances stratégiques tout en sécurisant l'accès aux ressources nécessaires à la croissance chinoise. Ce chapitre montre que les IDE chinois ne sont pas uniquement motivés par des rendements économiques, mais qu'ils constituent aussi un levier de **soft power** pour étendre l'influence chinoise à l'international.

1.5 Contribution de la thèse

Cette thèse apporte des contributions à la fois théoriques et empiriques qui enrichissent et transforment la compréhension des relations économiques internationales en intégrant une variable essentielle souvent négligée dans les analyses économiques classiques : la distance géopolitique. Elle éclaire le rôle crucial que jouent les relations politiques et diplomatiques dans la configuration des échanges commerciaux, l'allocation de l'APD et les décisions d'investissement étranger, notamment chinois. La thèse propose ainsi une nouvelle perspective qui complète et dépasse les modèles économiques traditionnels, généralement centrés sur des variables purement économiques comme la distance physique ou la taille des économies.

Sur le plan théorique, cette recherche se distingue en intégrant de manière systématique la distance géopolitique dans l'analyse des relations économiques internationales. Cette contribution repose sur l'idée que les relations économiques entre États ne peuvent plus être comprises uniquement à travers le prisme des déterminants économiques traditionnels, tels que les avantages comparatifs, la distance géographique ou la taille des marchés. En introduisant la distance géopolitique comme variable explicative, cette thèse remet en question l'importance exclusive de la proximité physique et souligne l'importance des relations politiques dans la détermination des flux économiques. La distance géopolitique est ici conceptualisée à travers des indicateurs concrets, tels que l'alignement des votes à l'Assemblée générale des Nations Unies (Voeten et al., 2023), la participation aux alliances politiques et les relations diplomatiques bilatérales, permettant ainsi d'affiner l'analyse des interactions économiques mondiales.

Ce cadre conceptuel vient compléter les modèles gravitaires traditionnels, qui restent parmi les outils les plus utilisés pour analyser les flux commerciaux entre nations. Ces modèles s'appuient historiquement sur des facteurs comme la distance géographique, la taille des économies, ou encore les liens culturels pour prédire les échanges bilatéraux. Cependant, ces approches, bien que robustes, omettent souvent la complexité des interactions politiques et stratégiques dans un contexte de rivalités géopolitiques croissantes. En intégrant la notion de distance géopolitique, qui reflète les affinités ou divergences politiques entre États, cette thèse propose une approche renouvelée et adaptée aux transformations contemporaines des relations internationales.

Les récents bouleversements géopolitiques et économiques, qu'il s'agisse des sanctions internationales, des conflits commerciaux, ou de la reconfiguration des alliances, mettent en évidence la nécessité d'élargir ces cadres d'analyse. Par exemple, des relations économiques étroites peuvent exister entre des pays politiquement alignés malgré une grande distance physique, alors que des tensions idéologiques ou

diplomatiques peuvent limiter les échanges entre pays géographiquement proches. Cette conceptualisation innovante, profondément ancrée dans les dynamiques géopolitiques actuelles, permet de mieux comprendre les logiques qui sous-tendent les décisions économiques des États.

En ce qui concerne la contribution empirique, cette thèse se distingue par l'utilisation de méthodes économétriques avancées pour fournir des preuves quantitatives solides de l'influence de la géopolitique sur les flux économiques internationaux. En appliquant des modèles tels que le « Poisson Pseudo-Maximum Likelihood » et des régressions en panel avec effets fixes et quantiles, cette recherche parvient à démontrer que la proximité géopolitique entre les pays favorise les échanges commerciaux, tandis que les tensions géopolitiques tendent à freiner ces flux. De plus, les résultats montrent que l'allocation de l'APD par les pays donateurs est en grande partie déterminée par des considérations géopolitiques, avec une préférence marquée pour les pays alignés politiquement avec les donateurs. Ce phénomène est particulièrement visible dans les périodes de crises internationales, où les priorités stratégiques des pays donateurs se reflètent dans leurs politiques d'aide.

L'analyse des IDE chinois, notamment dans le cadre de l'initiative Belt and Road, apporte également des éclairages empiriques précieux. Les résultats montrent que les IDE chinois sont fortement influencés par la proximité géopolitique des pays récipiendaires, en particulier dans les secteurs stratégiques comme les infrastructures de transport et les ressources naturelles. Ces investissements ne sont pas motivés uniquement par des objectifs économiques, mais également par une volonté claire de la Chine d'utiliser les IDE comme un levier de soft power pour consolider son influence géopolitique dans des régions stratégiques.

Les implications de ces résultats sont vastes et offrent des pistes pour repenser la manière dont les États conçoivent leurs stratégies économiques et géopolitiques dans un monde de plus en plus fragmenté politiquement (Chor, 2023). La démonstration empirique de l'importance de la géopolitique dans les décisions économiques invite les décideurs à intégrer cette dimension dans l'élaboration de leurs politiques commerciales, d'investissement et d'aide au développement. Les pays devront naviguer de plus en plus prudemment dans un environnement international marqué par des rivalités croissantes entre grandes puissances, en adaptant leurs stratégies pour tirer parti des relations géopolitiques tout en atténuant les risques associés aux tensions politiques. La thèse souligne ainsi l'importance pour les États d'adopter une vision stratégique qui combine à la fois les objectifs économiques et les réalités géopolitiques dans un monde de plus en plus polarisé.

Enfin, cette thèse ouvre de nouvelles voies de recherche pour l'avenir, en proposant d'élargir cette approche géopolitique à d'autres domaines économiques, tels que la coopération technologique, les accords environnementaux et la gestion des ressources globales. Les résultats suggèrent également la possibilité d'appliquer cette analyse à des niveaux plus régionaux ou sectoriels, pour explorer plus en détail comment les

dynamiques géopolitiques affectent des secteurs spécifiques de l'économie mondiale. En définitive, cette thèse apporte une contribution substantielle à la littérature en offrant à la fois des éclairages théoriques novateurs et des résultats empiriques robustes, qui renforcent la compréhension des interactions complexes entre économie et géopolitique dans le monde contemporain.

Chapter 2: Geopolitical Distance and Bilateral Trade.

This chapter is joint work with Ibrahim NANA (The World Bank).

2.1   Introduction

Despite the decrease in transportation and transaction costs, distance remains a key determinant of international trade relations. Traditional gravity models, widely used to study bilateral trade, have shed light on the influence of physical distance and cultural ties on trade flows (Baltagi et al., 2003; Egger, 2000; Silva & Tenreyro, 2006; M. Zhou, 2011). However, since the 90s there has been a widespread perception that globalization waves have suppressed the negative impact of "distance" on bilateral trade. The decline in transaction costs, especially transportation costs led to a dispersion of economic activities around the world, favoring the phenomenon of global value chains and globalization and leading to the so-called death of distance (Cairncross, 1997). However, studies based on the traditional gravity model of international trade confirm that the negative association between distance and bilateral trade flows remains effective (Brun et al., 2005). More recently, (Antràs & De Gortari, 2020) through their theoretical approach showed that the optimal location of production at a given stage in a global value chain is shaped by the proximity of that location to the precedent and the subsequent desired locations of production. Thus, physical distance remains important even in a world characterized by fragmented production stages.

However, physical proximity does not always guarantee economic proximity and friendly relationships. Practical cases have shown that physical proximity is not always a determinant of economic proximity. Despite their proximity (or contiguity), countries can remain separated by ideological and geopolitical distances, historical conflicts, and cultural differences. For instance, countries such as South Korea and North Korea have limited economic interactions despite their physical proximity. However, South Korea is economically tied to the United States of America (USA) compared to North Korea. Similarly, despite geographical proximity and cultural similarities with China, South Korea, and Japan seem to be economically and geopolitically close to the USA compared to China (Ho, 2018; Kim & Cha, 2016). Historical evidence which dates back from the Cold War also suggest that within Germany, West and East Germany's economic relationships were reduced despite their contiguity (Ahlfeldt et al., 2015). All these cases suggest that distance can also be ideological/geopolitical, and this aspect of distance can also constrain international trade.

In an ever-changing and interlinked world marked by growing geopolitical tensions, the integration of geopolitics into economics is becoming essential. The world is currently facing a geopolitical fragmentation

worsened and revealed by the invasion of Ukraine by Russia. In the face of dynamic global challenges, traditional factors of international trade, such as physical distance and cultural ties, seem insufficient to explain current trade relations. For instance, Janet Yellen[1] stresses the need for the USA to encourage "friend-shoring" of supply chains to ensure secure access to markets and reduce economic risks (dmalloy, 2022)[2]. This trend towards trade based on geopolitical proximity is strengthening, making it necessary to rethink the concept of distance in gravity models to account for geopolitical distance as a driver of bilateral trade. Thus, the analysis of bilateral trade requires a broader perspective integrating the impact of geopolitical distance in addition to physical distance, to better understand the challenges of contemporary trade.

The current empirical study takes note of this need to account for geopolitics and assesses the empirical impact of geopolitical distance on bilateral trade. While physical distance remains a significant determinant of bilateral trade, it is crucial to account for geopolitical distance which became essential as it has proven to be a pivotal factor in shaping international relationships. In this regard, the present study aims to examine the influence of geopolitical distance on bilateral trade, in addition to physical distance. Using bilateral trade data of 141 countries from 1980 to 2021, we relied on the augmented gravity model in which we consider the concept of distance as a function of physical distance, cultural links, and geopolitical distance to assess the impact of geopolitical distance on bilateral trade. To address the potential endogeneity of geopolitical distance, we adopt an Instrumental Variables (IV) approach, using the difference in the political system between bilateral pairs as an instrument, distinguishing between democracies and autocracies.

The findings suggest that friendship matters, and geopolitical distance even deepens the negative impact of physical distance on bilateral trade. The findings of our study reveal interesting conclusions in line with the current events, highlighting the negative impact of geopolitical distance on bilateral trade, like that of physical distance. To explore these dynamics, we rely on a simple Ordinary Least Squares (OLS) model and a PPML model, controlling for fixed effects and we further rely on an instrumental variable (IV) approach. Subsequently, we extend our analysis to examine the effects of geopolitical distance on different types of products, distinguishing between primary goods, mineral fuels, and industrial goods. The results highlight that geopolitical distance impacts the trade of primary products as well as the trade of mineral fuel, with a higher impact on mineral fuel trade. The study also reveals that geopolitical distance amplifies the negative impact of physical distance on bilateral trade. Interacting physical distance with geopolitical distance, the results indicate that as geopolitical distance increases, the negative impact of physical distance intensifies, thereby underscoring the interconnectedness of these two factors. Finally, our analysis reveals heterogeneity in the

---

[1] U.S. Treasury Secretary since January 25, 2021

[2] Speech given to the Atlantic Council think tank on April 13, 2022. Speech available here https://www.atlanticcouncil.org/news/transcripts/transcript-us-treasury-secretary-janet-yellen-on-the-next-steps-for-russia-sanctions-and-friend-shoring-supply-chains/ (consulted on August 9, 2023).

impact of geopolitical distance on trade relationships. In particular, the study shows that the negative impact of geopolitical distance on bilateral is valid for both advanced economies (AEs) and emerging and developing economies (EMDEs).

The rest of the paper is organized as follows: Section 2 presents a summary of a set of relevant literature on the topic. Section 3 presents the methodology followed by the study, highlighting how it integrates geopolitical distance in the gravity model as a determinant of global distance (or trade cost). Section 4 presents the results of the study and Section 5 concludes the study.

2.2   Background

The trade-geopolitical relationship has been addressed in several important scientific articles. These articles explore how geopolitical factors, such as trade policies, alliances, and international tensions, influence trade between countries. They have highlighted the importance of national interests, political relations, and geopolitical dynamics in determining trade policies and the functioning of the global trading system. These studies can be classified into simple aggregate analyses at the country level and bilateral analyses.

Firstly, several studies have evaluated the impact of geopolitics on economic relations using a simple analysis at the national level, relying on proxies to measure geopolitics (M. S. Aiyar et al., 2023; S. Aiyar et al., 2024; Alesina & Dollar, 2000; Burnside & Dollar, 2000; Carter & Stone, 2015; Dreher et al., 2009, 2024; Hoeffler & Outram, 2011; Krane, 2022). One period of history marked by high geopolitics is the Cold War. The Cold War was a period of geopolitical tensions characterized by competition and confrontation between communist nations led by the Soviet Union and Western democracies, including the United States, highlighting the impact of political intervention on trade during the Cold War. (Berger et al., 2013) reveal that during this period, countries receiving economic aid from the United States saw their exports increase, while those subjected to economic sanctions saw their exports decrease. Furthermore, American companies benefited from the political influence exerted by the United States, particularly in the energy and raw materials sectors. Investors also benefited from access to confidential information on American political projects, influencing their investment decisions, highlighting the significant impact of geopolitics and political relations on trade and investments during the Cold War. More recently (Ahir et al., 2022) presented the World Uncertainty Index (WUI), which measures global economic uncertainty by aggregating data from various sources. The measure of uncertainty includes uncertainty caused by geopolitical tensions. It highlights the negative impact of this uncertainty on economic growth, investment, and international trade, especially in low-income countries. Macroeconomic policies tailored to each country can mitigate these negative effects, but international support is needed to strengthen their ability to cope with economic uncertainty. The WUI is

a valuable tool for assessing the impact of economic uncertainty on different sectors and countries, and for guiding economic policy decisions. Following the same approach, (Caldara & Iacoviello, 2022) emphasize the importance of the Geopolitical Risk Index (GPR) based on an analysis of international press articles. According to this article, the GPR increases significantly during major geopolitical events, which have significant economic repercussions through fluctuations in stock markets and changes in interest rates. For example, geopolitical risk plays a crucial role in the volatility of crude oil prices in the international market, as highlighted by (Fang et al., 2023). Additionally, this has a significant impact on the efficiency of the gold market, which can have consequences for the trade of natural resources (including gold) in key economies such as India, the United States, and Brazil, as mentioned in (Bhatia, 2023). (Hoekman et al., 2023) uses a qualitative analysis method based on a review of existing literature and a conceptual analysis of current trends in international trade and global governance, highlighting the impact of current geopolitical tensions on the functioning of the WTO while proposing reforms to strengthen the organization. These reforms, with potentially significant implications for developing countries, focus on improving transparency, strengthening dispute settlement mechanisms, and modernizing trade rules. The document also emphasizes the importance of international cooperation in addressing global challenges such as climate change and the COVID-19 pandemic. It underscores the need for broader reflection on global governance and ways to strengthen international cooperation in a context of increased geopolitical competition. Additionally (Ambrocio & Hasan, 2021) identify the link between political ties and sovereign credit ratings and sovereign bond yields. The results of this study highlight the influence of political ties on the borrowing conditions of beneficiary countries, notably through high levels of regime similarity, diplomatic contacts, and coalition troop contributions. This political dimension of economic and financial relations between countries adds an important perspective to the overall understanding of international dynamics.

Secondly, some studies have also sought to evaluate the impact of geopolitics through alliances, political systems, or even ideologies, relying on bilateral data, on international bilateral economic relations, and more specifically on trade.

The relationship between democracy, peace, and international trade has garnered increasing interest among researchers in political science and economics. The study by (Bliss & Russett, 1998) used a quantitative methodology based on historical data to analyze the correlation between democracy and international trade over a period from 1962 to 1989. Their results indicate that democratic states tend to trade more with each other, highlighting the importance of political and even geopolitical factors in promoting economic exchanges globally. Meanwhile, the impact of geographical proximity and military alliances on trade flows between states is another significant dimension of international relations. Research by (Robst et al., 2007) used statistical methods to analyze trade and geographical data, highlighting the differential effect of these factors on global trade dynamics. Defense pacts also play a crucial role in promoting international trade between nations.

Chapter 2: Geopolitical Distance and Bilateral Trade.

Andrew G. Long's study used a similar quantitative approach, based on the analysis of data on military alliances and trade flows, to study their correlation (Long, 2003). His results showed that defense pacts are associated with higher levels of trade between alliance members, thus supporting the theory of security externalities. Furthermore, a study by (Umana Dajud, 2013) complements these perspectives by examining the impact of political proximity on international trade. This research used three measures of political proximity to assess its effect on bilateral trade flows, highlighting the importance of considering political factors in the analysis of international trade. (Bao et al., 2020) underscore the impact of bilateral attitudes on international trade. They show that countries with positive attitudes towards each other tend to trade more, while negative attitudes lead to a decrease in trade. These robust results, obtained using different estimation methods, highlight the importance of bilateral attitudes in trade relations. (Kleinman et al., 2020) support these findings by emphasizing the correlation between bilateral political alignment and actual economic exposure between countries. They demonstrate that similarities in UN voting and bilateral political alignment produce similar results. This positive relationship persists even after controlling for bilateral trade. They use measures of hub and authority to analyze changes in the centrality of countries in the network of real economic exposure. Geopolitical tensions can also be a source of geo-economic fragmentation, as highlighted by the IMF in its analysis of the risks and benefits of geopolitical tensions and their impact on the global economy (Jakubik & Ruta, 2023). According to this IMF study, the increased geopolitical vulnerability of emerging and developing economies could influence foreign direct investment flows and the economic performance of these countries. In a gravity model that considers other potential factors of FDI flows, the IMF shows in its economic outlook that the impact of geopolitical alignment is significant and economically relevant, especially for EMDEs. They concluded by formulating policy recommendations, including the need for multilateral efforts to preserve global integration and reduce the economic costs of fragmentation. Information exchange through multilateral dialogue can help minimize political uncertainty and reduce cross-border economic consequences. In bilateral geopolitical relations, some case studies (focused on specific countries) have emerged in the literature. This is the case of (Tran, 2022) which highlights the use of economic relations as a weapon to achieve geopolitical and national security objectives. It discusses technological decoupling between the US and China, particularly in the semiconductor and telecommunications sectors. The United States is increasingly dependent on imports of essential minerals controlled by China and Russia, while cost pressures on drugs make it difficult to relocate pharmaceutical supply chains out of China. This concept of "friendly-shoring" can lead to increased fragmentation of global supply chains and increased costs for businesses. Still in the Chinese context, (ElGanainy et al., 2023) highlight the factors influencing foreign policy alignment with China. These factors include the importance of similarities between regimes, diplomatic contacts, and Chinese arms trade. Geopolitical and political considerations not only shape the choice of contractual partners but also the depth of economic integration policies according to the analysis of (Hinz, 2023) which uses a theoretical and then empirical approach. The

latter suggests that economic integration can be used as a tool of foreign policy, with significant variations among countries in their ability to do so. Large countries consider political and economic motivations, while for small countries, political importance and attitudes towards the larger country are less decisive.

Although these studies have to some extent assessed the relevance of international and geopolitical relations on international trade and investments, none of them has undertaken a direct approach. Furthermore, the new measure of geopolitical distance construScted by (Bailey et al., 2017) offers the opportunity to revisit the impact of geopolitical distance on bilateral trade, distinguishing itself from previous studies by a much more appropriate measure of geopolitics. This study will complement this literature by relying on a gravitational model integrating cultural proximity as advocated by (Cyrus, 2012) and using geopolitical distance as an independent variable.

2.3   Methodology and Data

The current study seeks to estimate the impact of geopolitical distance on trade. Using a sample of 141 countries over the period 1980-2021, the paper relies on a gravity model and shows that distance is not only physical but also ideological/geopolitical.

2.3.1 Methodology : Conceptual framework of the gravity model

Several trade studies have relied on gravity models for their empirical specifications. The basic model explains trade flows between two countries ("i" and "j") by their size or wealth (GDP) and, inversely, the geographic distance between the two countries. The concept of distance and proximity includes physical distances, historical proximity, and cultural distance (common language, common border, and other factors affecting trade barriers). The model was used in the 1960s by (Hasson, 1964) and (Pöyhönen, 1963) to study trends in global trade. It was first introduced in the economics world by (Isard & Peck, 1954). The gravity model of trade is defined most simply as:

$$X_{ij} = \frac{KY_i^{\alpha}Y_j^{\theta}}{Dist_{ij}^{\beta}} \tag{1}$$

Including the concept of geopolitical distance to equation (**1**) and considering distance as a function of physical and geopolitical distance, equation (**1**) becomes:

$$X_{ijt} = \frac{KY_i^{\alpha}Y_j^{\theta}}{DistPhys_{ij}^{\beta_1}DistGeopol_{ijt}^{\beta_2}} \tag{2}$$

Chapter 2: Geopolitical Distance and Bilateral Trade.

Linearizing equation (2), we obtain the following results:

$$\ln(X_{ijt}) = lnK + \alpha \ln(Y_{it}) + \theta \ln(Y_{jt}) - \beta_1 \ln(DistPhys_{ij}) - \beta_2 \ln(DistGeopol_{ijt}) \quad (3)$$

Following the traditional approach of the gravity model of trade, this paper relied on an augmented gravity model with additional variables, such as common official language, common colonizer, common borders, trade agreements, and geopolitical distance. Thus, our empirical model based on the augmented gravity model is presented as follows:

$$\ln(X_{ijt}) = lnK + \alpha \ln(Y_{it}) + \theta \ln(Y_{jt}) - \beta_1 \ln(DistPhys_{ij}) - \beta_2 \ln(DistGeopol_{ijt})$$
$$+ \beta_3 \ln(Lang_{ij}) + \beta_4 \ln(Col_{ij}) + \beta_5 \ln(Contig_{ij}) + \beta_6 \ln(TA_{ij}) + \varepsilon_{ij} \quad (4)$$

Where X_{ijt} stands for bilateral trade value between i and j during the period t; Y stands for the value of nominal GDP of the trading partners; $DistPhys_{ij}$ is the absolute physical distance between the trading partners; $DistGeopol_{ijt}$ is the geopolitical distance between the trading partners $Lang_{ij}$ represents common official language; Col_{ij} represents colonial links; $Contig_{ij}$ represents bilateral pairs with common borders; TA_{ij} represents trade agreement between i and j, including regional trade agreements and currency unions. K is a constant.

Equation (4) is estimated using the OLS estimator and the PPML estimator applied to the nonlinear form of equation (4) is used for robustness check. The use of the PPML estimator for our robustness checks is a strategic choice that responds to a common problem generally faced by gravity models. In bilateral trade data, pair countries that did not trade in a given period reported values of zero. So, if bilateral trade between nations is zero and if we estimate them using a conventional log-linear model, these zero observations are dropped from the sample as undefined. Consequently, the number of observations decreases. In addition, the PPML estimator is a robust approach in the presence of heteroskedasticity (Silva & Tenreyro, 2006). This method can be applied to the levels of trade, thus estimating the non-linear form of the gravity model directly.[3] However independent of the problem mentioned, our independent variable namely geopolitical distance may be impacted by reverse causation raising the problem of endogeneity.

Endogeneity

The impact of geopolitical distance on bilateral trade is not exogenous and may suffer from endogeneity. Geopolitical distance can impact trade while engaging in more trade with a specific partner can lead to

---

[3] In a PPML specification, the dependent variable is trade, not the logarithm of trade, whereas the explanatory variables can still be in log forms. A major requirement of PPML estimation is that the variable should have only positive values.

geopolitical convergence or divergence. For instance, the economic and trade ties between India and Russia have bolstered their geopolitical cooperation (Desai & Goldberg, 2007). The current study has considered the potential problem of endogeneity and proposed two approaches to solving it. First, we relied on lagged geopolitical distance in the estimation to counter the reverse causation in the relation between bilateral trade flow and bilateral geopolitical disagreement[4]. This approach helps reduce the reverse causation. Second, we used an instrumental variable (IV) approach to solve the endogeneity problem (Y. Li & Zahra, 2012; Poppo et al., 2016; Tang & Wezel, 2015; Wooldridge, 2002; K. Z. Zhou & Li, 2012). The IV approach will use the difference in the natural political systems between the bilateral pair as an instrument. By doing this, we are considering the level of geopolitical distance generated by differences in political systems between countries, making it exogenous to international trade.

The polity2 score provides a measure of the political system of a country (autocracy vs. democracy). The difference between the polity2 score will be used as an instrument since it allows the identification of democracies and autocracies. The idea behind this instrument is to identify the impact of external changes in bilateral geopolitical distance on bilateral trade. To do so we rely on changes induced by the difference in the governance system in place in bilateral pair countries as an instrument. Generally, these systems are the results of long history and cultural facts. This instrument is exogenous and exclusive. The only way the difference in governance systems can impact bilateral trade is through its impact on countries' relationships (bilateral geopolitical distance). One can argue in favor of the fact that democracies are associated with economic growth and trade. However, the studies investigating the impact of democracy present mixed results (e.g., (Pozuelo et al., 2016)). Also, in terms of relevance, differences in governance systems are highly correlated with bilateral geopolitical distance. Most of the time, there are natural geopolitical tensions between countries with different governance systems (e.g., USA vs. Russia or USA vs. China).

---

[4] The use of lagged independent variables is frequently applied to alleviate the concerns inherent in the endogeneity induced by simultaneous phenomena (e.g. (Tang and al., 2014); (Griffith and al., 2017)). This strategy consists in introducing a time lag between the variables concerned, thus enabling a finer distinction to be made between short- and long-term repercussions, while reducing the biases arising from concomitant fluctuations. However, proper selection of time lags and precise model formulation remain imperative to guarantee eminently accurate results. In our case study, we postulate that policy measures and decision-making influencing geopolitical configurations require a time interval to be implemented and generate a measurable impact on bilateral trade. The use of a one-period lag could thus reflect this implementation delay and help capture gradual effects over time, while allowing for greater apprehension of immediate economic responses.

2.3.2 Data

2.3.2.1 Variables and sources

Most of the variables used in our estimations come from the CEPII databases. The dependent variable comes from CEPII databases on bilateral trade. The independent variable that captures uncertainty comes from (Bailey et al., 2017). All control variables are obtained from the CEPII databases. Trade agreement data are obtained from Mario Larch's Regional Trade Agreements Database (**Table 1**).

Table 1. Variables and data sources

Variable	Sources
Gross Domestic Product (GDP)	CEPII and World Bank Group
Geopolitical distance	Constructed by (Bailey et al., 2017)
Physical distance	CEPII database
Cultural & Colonial links	CEPII database
Trade agreements	Mario Larch's Regional Trade Agreements Database[5]

To capture the friendship and alignment of states' preferences in foreign policy, we employ the "geopolitical distance" variable developed by (Bailey et al., 2017). This variable is based on voting records in the United Nations General Assembly spanning from 1946 to 2021. The approach begins by initially estimating an ordered logit model across the three potential voting choices (affirmative, abstention, negative), where selection relies on model parameters combined with a country-specific latent voting preference for a given year. The latent process is assessed by imposing a Bayesian precedence on preferences, then using a Metropolis-Hastings/Gibbs sampling algorithm to deduce the parameters of the logit model, followed by the posterior distribution of latent preference parameters. The distance between two countries each year is then calculated as the absolute magnitude of the difference between the deduced specific voting preference parameters. The greater the distance between two countries, the more divergent their preferences (opposing geopolitical interests), while a smaller distance implies a convergence of preferences (similar geopolitical interests).

This approach to measuring geopolitical distance offers a nuanced understanding of the relationships between countries based on their voting behavior in the UN General Assembly. By considering the historical context of international relations as reflected in voting patterns, it provides a comprehensive and dynamic measure of the alignment of states' foreign policy preferences. Moreover, the Bayesian framework employed in the estimation process allows for a rigorous assessment of uncertainty and enables robust inference regarding geopolitical distances between countries.

---

[5] Trade agreements data: https://www.ewf.uni-bayreuth.de/en/research/RTA-data/index.html (consulted on June 22, 2023).

Chapter 2: Geopolitical Distance and Bilateral Trade.

The calculated geopolitical distance serves as a valuable tool for both researchers and policymakers, facilitating the analysis of diplomatic relations, alliance formations, and potential conflicts. It captures not only the overt diplomatic interactions between nations but also the underlying ideological and strategic alignments that shape their foreign policy decisions. It represents a sophisticated and empirically grounded approach to capturing the complex dynamics of international relations. Its integration into analyses of trade, investment, and geopolitical risks provides valuable insights into the interconnectedness of global affairs and informs strategic decision-making in both academic and policy realms. Additionally, the availability of the database[6] ensures transparency and reproducibility, enabling researchers to access the data and utilize it for various analyses and applications in the field of international relations.

Focusing on the control variables, their potential impact on trade is presented as follows: *(i)* GDP captures the country's economic size and wealth. It also gives information on the ability of governments to manufacture export-oriented products and their capacity to import. It is a proxy of economic development. Thus, this variable should have a positive effect on bilateral trade. *(ii)* The distance variable represents bilateral physical distance. A higher physical distance affects transportation costs, raising the unit price of the final product for sale and reducing its demand. Therefore, distance should negatively impact bilateral trade. *(iii)* Similarly, to physical distance, geopolitical distance was also included in the model to account for the level of geopolitical distance between bilateral pairs. This variable is complementary to the physical distance variable. An increase in geopolitical distance is expected to reduce bilateral trade. *(iv)* Colonial and cultural links also matter in explaining bilateral trade. We, therefore, expect a positive impact of some of these variables. *(v)* Finally, trade agreements (regional agreements and currency unions) should help increase trade volume. Thus, partner countries that are in the same regional trade agreement or currency union should trade more.

2.3.2.2   Geopolitical distance and trade

Table 2. Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Trade (US$ million)	433,797	730	6,317	0	479,700
GDP (US$ million)	778,540	319,936	1,324,284	111	22,996,100
GDP per capita (US$)	778,540	8,826	14,470	65	100,819
Geopolitical distance	685,496	0.98	0.79	0	5.3
Distance	759,214	7,304	4,240	8	19,939

Source: Authors' calculations based on CEPII databases

The current study uses an unbalanced panel of bilateral data between 141 countries over the period 1980-2021. The average trade value is around US$ 730 million over the period. The average GDP of countries in the sample is US$ 319, 9 billion, with an average GDP per capita of US$ 8,826. The geopolitical distance goes

---

[6] The database is available via this link: https://dataverse.harvard.edu/dataverse/Voeten, which provides the most up-to-date version of geopolitical distance (Voeten et al., 2023).

from 0 to 5.3 with an average geopolitical distance of 0.98 (**Table 2**). The highest level of geopolitical distance corresponds to the geopolitical distance between Libya and the USA in 1995. This high level of diplomatic disagreement was the result of repressions against Libya, which refused to cooperate with investigations into terrorist acts against Pan Am Flight 103 over Lockerbie, Scotland, in 1988, and France's Union de Transports Aériens (UTA) flight 772 over the Niger in 1989. As a result, the UN Security Council imposed sanctions on Libya in 1992 to press Tripoli to hand over two suspects wanted for the 1988 bombing of the US Pan American Airways airliner. Additional sanctions were adopted in the 1996 US Congress on firms doing business with Iran and Libya. These events explain the high level of geopolitical distance between the two countries. However, the lowest level of geopolitical distance is between Panama and Papua New Guinea, two small states with less involvement in geopolitics.

The link between international relationships and geopolitics is an old concern. In this section, we presented the trade trend and average geopolitical distance trend over the years (from 1980 to 2020). Figure 1 provides details on the joint evolution of trade (aggregated from bilateral trade data) and average geopolitical distance. The figure shows in some cases a clear negative association between trade and the average geopolitical distance between countries. By 2003-2004 we observed a spectacular divergence between global trade and global average geopolitical distance. This observation means somewhat that the spectacular trade increase observed during this period was also accompanied by an important decrease in geopolitical distance. While this association is not a causation, it gives an idea of the evolution of these two variables. However, Figure 1 does not show the bilateral dimension and does not allow us to appreciate the impact of geopolitical distance on trade.

We further divided geopolitical distance observations into quartiles depending on the distribution of the variable for the whole sample, the first quantile corresponding to friendly relationships while the fourth quartile corresponds to less friendly or conflictual relationships. Figure 6 shows the trade trend with bilateral partners belonging to the first and fourth quartiles. The figure shows that in some cases, bilateral trade with friends is higher than bilateral trade with non-friends. However, this difference seems to be not significant and depends on the period (Figure 6), witnessing the existence of heterogeneity in the impact.

Figure 1: Trends in trade and geopolitical distance
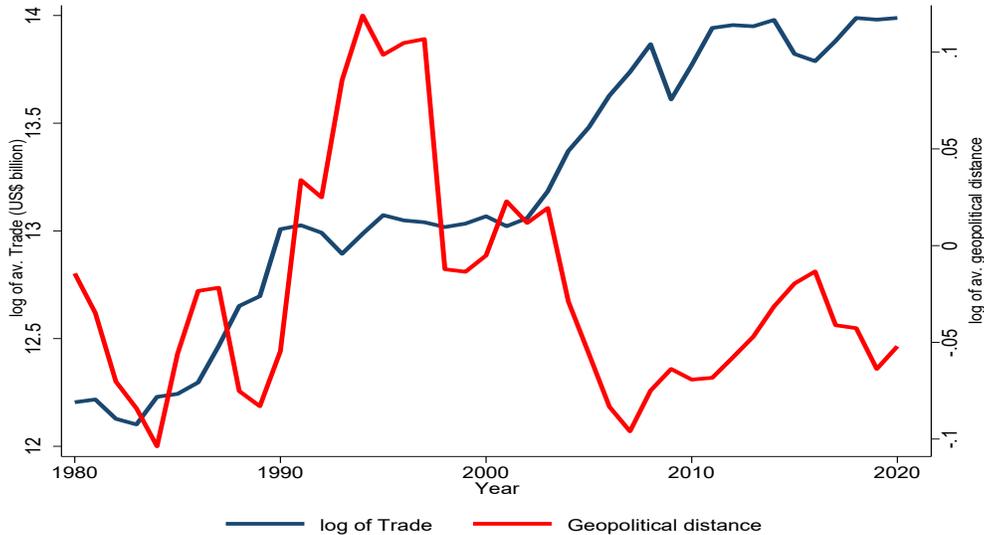
Source: Authors' calculations based on CEPII data

To consider these heterogeneities and look more in detail at the relationship between trade and geopolitical distance, we further considered specific cases to assess the bilateral impact of geopolitical distance on trade. Relying on the world's top traders namely the USA, China, and Germany as well as some important actors in international geopolitics including Russia, the United Kingdom (UK), and France, we look at the value of international trade between these countries and their partners depending on the percentiles of geopolitical distance with these partners as described in Figure 7 to Figure 11. In other words, we represented these countries' global trade with their friendly (first quartile of geopolitics) and less friendly partners (fourth quartile of geopolitics). Figure 7 to Figure 11 show that for countries such as the USA, France, and the UK, an important share of their international trade occurs with the friendliest partners (partners belonging to the first quartile). This trend is mitigated for Russia and China. This first look at the relationship between geopolitics and trade highlights the existence of a negative impact of geopolitical distance on trade. However future estimates are necessary for such a conclusion.

2.4   Estimations Results

2.4.1   Results of the baseline estimation

Figure 2. Scatter– relationship between trade and distance (geopolitical and physical distance)

Figure 3: Trade and Geopolitics   Figure 4 Trade and Distance
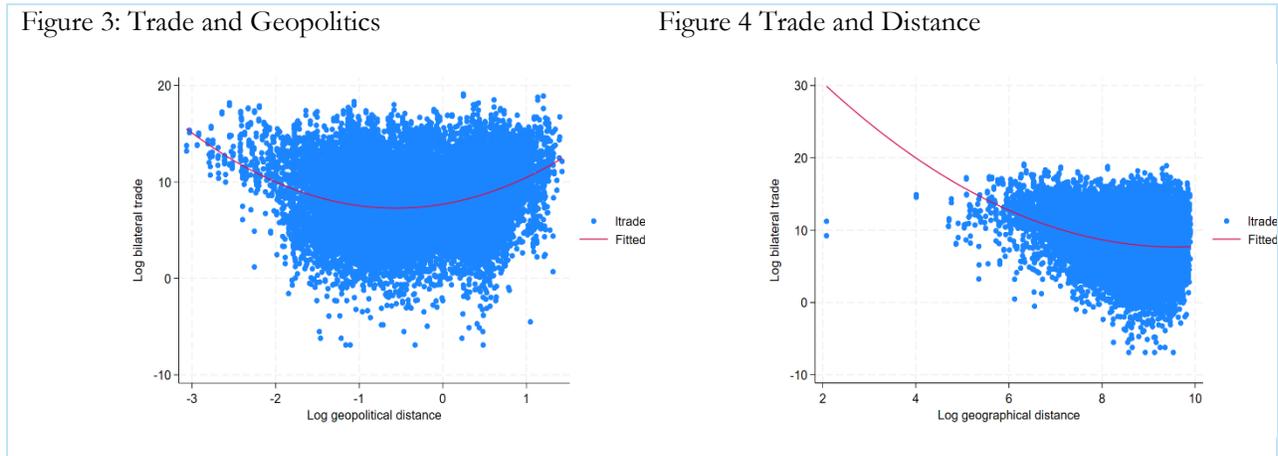
Source: Authors' calculations based on CEPII data.

While distance is negatively associated with trade, the relation between geopolitical distance and trade presents a U-shape form. Figure 2 shows the relation between trade and both physical and geopolitical distance. Trade is negatively correlated with distance. The higher the distance between countries, the lower the value of bilateral trade between them (Figure 4). While Figure 4 shows a simple correlation between trade and distance, it aligns with years of findings from gravity models linking trade and distance. Figure 3 shows that the relationship between trade and geopolitical distance is in the form of a U-shape, with distance having a negative impact until a certain threshold of geopolitical distance. More estimations are necessary to assess the causal impact of geopolitical impact on trade.

In addition to physical distance, geopolitical distance matters in explaining bilateral trade flows. The current paper assesses the relationship between bilateral trade and geopolitical distance. Using the OLS and PPML approaches, the results of the basic model show that friendship is just as important as neighborhood. While Adam Jakubik and Michele Ruta in an IMF working paper (Jakubik & Ruta, 2023) showed similar findings relying on the impact of trade uncertainty on bilateral trade with diplomatic distance being an aggravating factor, the current paper directly pointed to the negative impact of geopolitical distance on bilateral trade. **Table 3** shows that a 1 percent increase in geopolitical distance reduces bilateral trade by 0.085 percent (0.029 when using OLS) (columns [1] and [4]).   When considering both physical and geopolitical distance, the PPML findings highlight that a 1 percent increase in geopolitical distance reduces bilateral trade by 0.01 percent, while a 1 percent increase in physical distance reduces bilateral trade by 0.57 percent (column

[6]). This finding confirms the importance of geopolitics in international trade relations but also highlights that physical distance still matters even more than geopolitical distance. The finding suggests that the basic gravity model data follows the expectations: GDP in the exporting country and GDP in the importing country are positively associated with bilateral trade. In addition, a common official language, belonging to the same regional trade agreement, and contiguity, positively impact bilateral trade as expected (**Table 3**).

Table 3. Results – Impact of geopolitical distance on bilateral trade

VARIABLES	[1]	[2]	[3]	[4]	[5]	[6]
	OLS			PPML		
	ltrade_o	ltrade_o	ltrade_o	trade_o	trade_o	trade_o
lgeopol_dist	-0.0290***		0.0424	-0.0851***		-0.0118**
	(0.0105)		(0.00984)	(0.00486)		(0.00586)
lphys_dist		-1.030***	-1.096***		-0.572***	-0.574***
		(0.0207)	(0.0211)		(0.0106)	(0.0101)
lgdpcap_o	0.0478***	0.0427***	-0.00835	0.00435	-0.0329***	-0.0785***
	(0.0135)	(0.0131)	(0.0133)	(0.00905)	(0.00789)	(0.00822)
lgdpcap_d	-0.0329**	-0.0406***	-0.0736***	0.0618***	0.0218***	-0.0208***
	(0.0144)	(0.0135)	(0.0138)	(0.00729)	(0.00615)	(0.00648)
lgdp_o	1.093***	1.158***	1.176***	0.789***	0.804***	0.837***
	(0.0105)	(0.00992)	(0.01000)	(0.00606)	(0.00583)	(0.00595)
lgdp_d	0.804***	0.855***	0.871***	0.758***	0.775***	0.805***
	(0.0110)	(0.0104)	(0.0105)	(0.00567)	(0.00531)	(0.00533)
comcol	0.809***	0.684***	0.627***	0.785***	0.848***	0.621***
	(0.0775)	(0.0689)	(0.0714)	(0.0617)	(0.0438)	(0.0559)
col45	1.132***	1.118***	1.103***	0.750***	0.694***	0.608***
	(0.144)	(0.133)	(0.137)	(0.0329)	(0.0286)	(0.0270)
col_dep_ever	0.761***	0.555***	0.607***	-0.108***	-0.243***	-0.190***
	(0.115)	(0.104)	(0.106)	(0.0237)	(0.0237)	(0.0220)
col_dep	-1.161***	1.896***	-0.732***	-0.851***	1.546***	-0.542***
	(0.117)	(0.397)	(0.116)	(0.0396)	(0.0611)	(0.0376)
contig	2.874***	1.352***	1.306***	1.239***	0.596***	0.618***
	(0.0835)	(0.0825)	(0.0822)	(0.0195)	(0.0271)	(0.0265)
comlang_off	0.707***	0.616***	0.598***	0.141***	0.171***	0.0941***
	(0.0519)	(0.0464)	(0.0468)	(0.0184)	(0.0216)	(0.0223)
rta	1.706***	0.566***	0.666***	0.881***	0.247***	0.400***
	(0.0397)	(0.0361)	(0.0365)	(0.0150)	(0.0198)	(0.0198)
Constant	-26.03***	-18.92***	-18.91***	-17.50***	-12.79***	-13.95***
	(0.259)	(0.273)	(0.279)	(0.182)	(0.203)	(0.192)
Observations	399,980	427,253	399,980	399,980	427,253	399,980
R-squared	0.573	0.605	0.611	0.8518	0.8568	0.8806

Note: *lgeopol_dist* is geopolitical distance/ diplomatic disagreement; *lphys_dist* is the logarithm of distance; *lgdpcap_o* is the logarithm of the exporter's GDP per capita; *lgdpcap_d* is the logarithm of the importer's GDP per capita; *lgdp_o* is the logarithm of exporter's GDP; *lgdp_d* is the logarithm of importer's GDP; *comcol* is a dummy that equals to 1 if bilateral pair had a common colonizer post-1945; *col45* is a dummy that equals to 1 if bilateral pair was in a colonial relationship post-1945; *col_dep_ever* is a dummy that equals 1 if the bilateral pair have ever been in a colonial or dependency relationship; *col_dep* is a dummy that equals 1 if the bilateral pair are in a colonial or dependency relationship; contig if the two partners are contiguous; *contig* is a dummy that equals 1 if the bilateral pair share the same border; *comlang_off* is a dummy that equals 1 if the bilateral pair have a common official or primary language and *rta* is a dummy that equals to 1 if bilateral pairs in the same regional trade agreement. Robust standard errors are in parentheses. *** p<0.01, ** p<0.05, * p<0.1

These findings hold significant importance, although they might be susceptible to model specification errors. Indeed, bilateral data often exhibit correlations, as exchanges between two countries can be influenced by common or shared factors. Additionally, each country possesses unique attributes that can impact its bilateral exchanges with the rest of the world, not to mention country-specific temporal variations. Incorporating fixed effects becomes crucial for more accurate modeling of the inherent complexity of international trade. By accounting for country-specific factors and mitigating potential biases arising from unobserved heterogeneity, these fixed effects enhance the representation of reality. The estimation results, presented in **Table 4**, encompass various fixed effects, including those related to the importer, exporter, time, and bilateral pairs in some cases. Thus, we consider the unobservable elements linked to countries, time, and the bilateral pair elements that may not have been considered. It is noteworthy that the conclusions remain consistent, indicating that geopolitical distance, in addition to physical distance humpers trade between countries. This finding holds in both methodological approaches (OLS and PPML). Specifically, employing the more robust PPML approach, we observe that a 1% increase in geopolitical distance leads to a trade reduction of approximately 0.0053% (column [6]).

Table 4. Results – Impact of geopolitical distance on bilateral trade – including fixed effects.

VARIABLES	[1]	[2]	[3]	[4]	[5]	[6]
	OLS-FE			PPML-FE		
	ltrade_o	ltrade_o	ltrade_o	trade_o	trade_o	trade_o
lgeopol_dist	-0.111***		-0.0228***	-0.0300**		-0.00539**
	(0.00840)		(0.00525)	(0.0143)		(0.00274)
lphys_dist		-1.393***	-0.261		-0.650***	-0.482***
		(0.0225)	(0.225)		(0.0236)	(0.0690)
Observations	399,980	427,253	399,314	399,980	427,253	399,314
R-squared	0.700	0.740	0.864	0.910	0.926	0.984
Exporter FE	Yes	Yes	Yes	Yes	Yes	Yes
Importer FE	Yes	Yes	Yes	Yes	Yes	Yes
Pair FE	No	No	Yes	No	No	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: *lgeopol_dist* is geopolitical distance; *lphys_dist* is the logarithm of distance. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard gravity model variables have been included.

2.4.2 Robustness checks: The IV approach

The current study employs two approaches to mitigate potential endogeneity stemming from potential simultaneity bias. The first approach involves delaying the independent variable, and the second, using an IV method, as described in **section 3.2.** By introducing a one-period lag to the geopolitical distance variable, we find that similarly to physical distance, the impact of geopolitical distance aligns closely with our main findings, with significance levels of 1 percent for most of the findings. According to the findings, a 1 percent increase in geopolitical distance results in a 0.004 percent decrease in trade, as opposed to a 0.496 percent

decrease in physical distance (**Table 5**, column [3]). However, the use of lagged geopolitical distance to address endogeneity through simultaneity bias carries several limitations. While they may help mitigate bias, they can also lead to inappropriate extrapolations, loss of temporal information, and reduced estimation efficiency. Issues of serial correlation and sensitivity to the specifications of lagged variables can also impact the results. Also, in case the lagged variable remains endogenous, the endogeneity problem is only partially resolved. To meet these challenges, we apply a secondary instrumental variable approach, utilizing the differences in the political system between bilateral pairs as an instrument for geopolitical distance. This method yields more robust and coherent estimations of the causal impact of geopolitical distance on trade. First, the first-stage results suggest that the instrument is valid. The difference in the political system is significantly associated with geopolitical distance, indicating that the instrument is pertinent in explaining geopolitical distance. In addition, the model is exactly identified, and the F test is significant. The results align closely with our core findings: both geopolitical and physical distances exert a significantly negative impact on bilateral trade. However, the IV approach suggests a more important impact of geopolitical distance compared to the OLS approach. A 1 percent increase in geopolitical distance results in a trade reduction of 1.2 percent, as opposed to a decline of 0.883% for physical distance (**Table 5**, column [6]).

Table 5. Impact of geopolitical distance on bilateral trade – PPML and Instrumental Variable.

	[1]	[2]	[3]	[4]	[5]	[6]
		PPML-FE			IV	
VARIABLES	trade_o	trade_o	trade_o	ltrade_o	ltrade_o	ltrade_o
Panel A: Result of PPML and IV						
lgeopol_dist (t-1)	-0.0307**		-0.00476*			
	(0.0143)		(0.00279)			
lgeopol_dist				-1.338***		-1.178***
				(0.140)		(0.144)
lphys_dist		-0.650***	-0.496***		-1.393***	-0.883***
		(0.0236)	(0.0714)		(0.00547)	(0.0644)
Panel B: Results of the first stage estimates						
Difference Pol System	-	-	-	0.0078***	-	0.0071**
				(0.00048)		(0.00047)
Observations	393,156	427,253	392,486	366,727	427,253	366,727
First step F – test	-	-	-	255.78***	-	226.57***
Exporter FE	Yes	Yes	Yes	Yes	Yes	Yes
Importer FE	Yes	Yes	Yes	Yes	Yes	Yes
Pair FE	No	No	Yes	No	No	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes

Note: *lgeopol_dist* is geopolitical distance; *lphys_dist* is the logarithm of distance; the **Difference Pol System** is the difference between the exporter and the importer level of democracy. For the IV approach, the model is exactly identified. *** p<0.01, ** p<0.05, * p<0.1. Standard gravity model variables have been included.

2.4.3 Heterogeneity

2.4.3.1   Commodities and Energy most Influenced by geopolitical disagreement.

We further investigate the impact of geopolitical distance on bilateral trade by type of product/industry. The findings complement the baseline results and show that geopolitical distance negatively impacts the bilateral trade of commodities and mineral fuel. The results show that energy trade (mineral fuel) is more sensitive to geopolitical tensions (**Table 6**). The use and production of fossil fuels are unbalanced across the world, making energy trade between countries necessary to support demand and provide revenue for exporters. The international energy market is complex and subject to several distortions. However, it is now evident that as economies grow, energy demand increases (Apergis & Tang, 2013).Oil-exporting nations of OPEC are aware of this necessity, and they discovered in the 1970s that their energy resources gave them the ability to put major pressure on larger, richer energy importers (*Dennis Tänzler | Wilson Center*, s. d.)[7]. Therefore, energy has been used for a long time as an instrument of pressure by oil exporters in their diplomatic relationships (*Milestones: 1969–1976 - Office of the Historian*, s. d.)[8]. Several studies have assessed the link between energy trade and geopolitics. For instance, (F. Li et al., 2021) show that geopolitics has a significant negative impact on the import and export of the energy trade, and the inhibition of the export is greater than that of the import. Thus, the result of the current section lies in previous findings in the literature and complements the general observation of the importance of geopolitical links in trade relations between countries.

Table 6. Impact of geopolitical distance on bilateral trade by type of product/industry (PPML-FE).

VARIABLES	[1] Log Commodity Trade	[2] Log Commodity (No Fuel) Trade	[3] Log Mineral Fuel Trade	[4] Log Industrial products Trade
lgeopol_dist (t-1)	-0.0128***	-0.0139***	-0.0267***	-0.00440
	(0.00409)	(0.00384)	(0.00879)	(0.00355)
lphys_dist	-0.256	0.00350	0.0928	-0.480***
	(0.173)	(0.162)	(0.323)	(0.159)
Observations	324,252	319,937	141,867	361,657
R-squared	0.827	0.837	0.743	0.886
Exporter FE	Yes	Yes	Yes	Yes
Importer FE	Yes	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes

Note: *lgeopol_dist* is geopolitical distance; *lphys_dist* is the logarithm of distance. *** p<0.01, ** p<0.05, * p<0.1. Standard gravity model variables have been included.

---

[7] https://www.wilsoncenter.org/article/new-geopolitics-decarbonizing-world (consulted on October 17, 2023).

[8] *In October 1973, following the Yom Kippur War between Israel and several Arab countries, OPEC members, including Saudi Arabia and Iran, imposed an oil embargo on Western countries supporting Israel. Oil prices quadrupled, leading to a global economic crisis and energy shortages in many importing nations. This crisis bolstered the negotiating power of oil-exporting countries on the international stage https://history.state.gov/milestones/1969-1976/oil-embargo (consulted on October 17, 2023).
*In January 2009, a dispute between Russia and Ukraine over gas prices led to a disruption of Russian gas deliveries to Europe through the Ukrainian pipeline. This created gas shortages in some European countries and raised concerns about the reliability of Russian gas supplies (Stern et al., 2009).

2.4.3.2   *Geopolitical distance deepens the negative impact of physical distance.*

We also investigated whether the traditional impact of physical distance on bilateral trade depended on geopolitical distance. To answer this question, we introduced a multiplicative term (interaction between physical and geopolitical distance) into equation (4). This analytical approach enables us to better understand the complex mechanisms of international trade from a more realistic point of view, by taking into account elements that go beyond the simple geopolitical or physical distance. The main question that we seek to answer in this section is whether the impact of physical distance on bilateral trade depends on the level of geopolitical distance. **Table 7** presents the results of estimates for this new specification. The coefficients in front of physical distance and the interaction between physical distance and geopolitical distance are negative and statistically significant, indicating that distance negatively impacts bilateral trade, but this negative impact is aggravated as geopolitical distance increases.

Table 7. Impact of geopolitical distance on bilateral trade – multiplicative impact.

VARIABLES	[1] PPML trade	[2] IV Log trade	[3] PPML trade	[4] IV Log trade
lgeopol_dist	0.0711**	3.654***		
	(0.0335)	(0.585)		
lgeopol_dist × lphys_dist	-0.0106**	-0.426***		
	(0.00424)	(0.0692)		
lphys_dist	-0.539***	-1.784***	-0.466**	-0.902***
	(0.200)	(0.0577)	(0.193)	(0.105)
lgeopol_dist perctentile			0.00743*	0.114***
			(0.00445)	(0.0214)
geopol_dist perctentile × lphys_dist			-0.00106**	-0.0128***
			(0.000532)	(0.00249)
Observations	399,314	366,727	399,314	366,727
Exporter FE	Yes	Yes	Yes	Yes
Importer FE	Yes	Yes	Yes	Yes
Pair FE	Yes	No	Yes	No
Time FE	Yes	Yes	Yes	Yes

Note: *lgeopol_dist* is geopolitical distance; *lphys_dist* is the logarithm of distance. *** p<0.01, ** p<0.05, * p<0.1. Standard gravity model variables have been included.

Figure 5 presents the marginal impact of physical distance depending on geopolitical distance. We examine the impacts at different percentiles of geopolitical distance. A 1 percent increase in physical distance results in a 1.2 percent decrease in bilateral trade between countries positioned at the 25th percentile of geopolitical distance (close or "friendly" countries) compared to the average, and a 0.91 percent decrease between

countries positioned at the 1st percentile (very close with substantial geopolitical convergence). However, the same increase in physical distance leads to a reduction of around 1.86 percent in bilateral trade between countries at the 75th percentile of geopolitical distance (geopolitical rivals) relative to those at the mean, and a more important decrease in trade (2.2 percent) between countries positioned at the 99th percentile (higher rivalry or "non-friends").

These findings support the assumption that geopolitical distance deepens the negative impact of physical distance. The adverse effects of distance on trade are less perceived or less painful when countries trade relatively more with "friendly" partners. In other words, in trade relationships between friends, distance still matters but it becomes a more serious obstacle to trade as soon as strong rivalries arise and relations between partner countries deteriorate.

Figure 5. Average marginal impact: Trade impact of physical distance deepens with geopolitics.
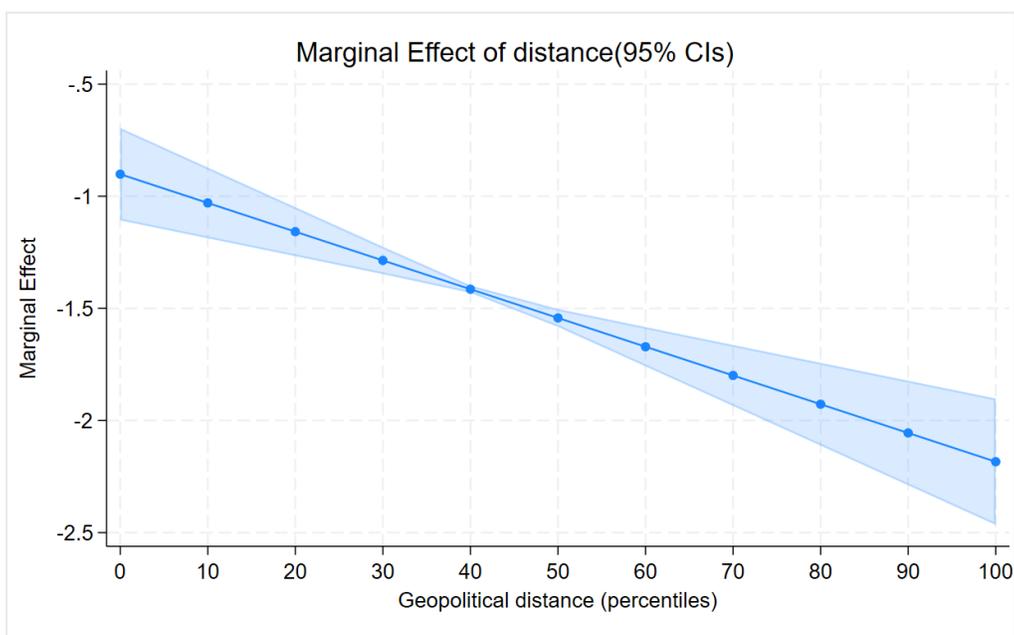
Source: Authors' calculations based on estimates results.

2.4.3.3   The impact of geopolitical distance is valid for all income groups.

We delve deeper into our analysis by investigating the presence of heterogeneity, particularly concerning income-based disparities. The impact of geopolitical distance on trade relationships could vary depending on income groups. Advanced economies, for instance, often share close geopolitical ties due to their economic, political, and security interconnections. They also possess the capacity to wield political and diplomatic

influence over emerging and developing economies, potentially shaping their trade decisions and economic policies.

Table 8. Impact of geopolitical distance on bilateral trade – AEs vs. EMDEs.

	[1]	[2]	[3]	[4]	[4]	[5]	[6]	[7]
	PPML				IV			
Exporter ->	AE	AE	EMDE	EMDE	AE	AE	EMDE	EMDE
Importer ->	AE	EMDE	AE	EMDE	AE	EMDE	AE	EMDE
VARIABLES	trade_o	trade_o	trade_o	trade_o	ltrade_o	ltrade_o	ltrade_o	ltrade_o
lgeopol_dist	-0.0124***	-0.0625***	-0.0720***	-0.0187***	1.132	-0.119***	0.0918	-3.098***
	(0.00336)	(0.0138)	(0.0169)	(0.00434)	(2,485)	(0.0456)	(0.145)	(0.600)
lphys_dist	-0.221***	-0.758***	-0.652***	-0.104	-8.454	-1.419***	-1.468***	-0.949***
	(0.0853)	(0.0140)	(0.0205)	(0.128)	(162.3)	(0.0126)	(0.0299)	(0.134)
Observations	27,675	104,468	73,768	193,457	26,051	96,569	68,407	175,700
Exporter FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Importer FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes	Yes	No	No	No	No
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Note: *lgeopol_dist* is geopolitical distance; *lphys_dist* is the logarithm of distance. AE represents Advanced Economy while EMDE represents Emerging Market or Developing Economy. *** p<0.01, ** p<0.05, * p<0.1. Standard gravity model variables have been included.

To ascertain this divergence in the influence of geopolitical distance on trade relationships across income categories, we divided our sample into two main groups: advanced economies (AE) and emerging and developing economies (EMDE), categorized based on their roles as importers or exporters. The results obtained using the PPML approach and instrumental variable method are documented in **Table 8**. The findings reveal that geopolitical distance negatively affects trade, regardless of the income category to which the trading partners belong. Nevertheless, the magnitude of this impact remains more pronounced when partners do not belong to the same category[9].

2.5   Conclusion

Our analysis uses bilateral trade data from 141 countries from 1980 to 2021 to investigate the impact of geopolitical distance on bilateral trade. By leveraging gravity models and considering geopolitical distance as a trade cost and a substantial part of the global distance between nations, this research unveiled significant findings regarding geopolitics and bilateral trade. In the wake of Russia's invasion of Ukraine, this research paper is important and discusses a topic that has long been a determinant in international relationships. It also

---

[9] Within the PPML approach, an increase of 1% in geopolitical distance leads to a decrease of 0.062% and 0.072% in bilateral trade for AE-exporter and EMDE-importer relationships, as well as for AE-importer and EMDE-exporter connections (columns [2] and [3]). This contrasts with a trade reduction of less than 0.019% observed among countries falling within the same category.

raises the importance of missing variables in gravity models using bilateral distance as a determinant of bilateral trade, while omitting to consider geopolitical distance which is also important.

First and foremost, the study demonstrates that "friendship" between countries, as well as their geographical proximity, plays a pivotal role in the dynamics of international trade. This observation underscores the importance of diplomatic ties and the convergence of foreign policy preferences in the development of trade exchanges.

Specifically, the analysis of the effects of geopolitical distance yielded relevant conclusions. The negative impact of geopolitical distance on bilateral trade of raw materials and mineral fuels is noteworthy, particularly pronounced in the energy sector where geopolitical distance can carry substantial consequences. Moreover, it has been demonstrated that the unfavorable effect of physical distance on trade is exacerbated when geopolitical distance is greater. Furthermore, geopolitical distance negatively impacts trade regardless of the income category to which trading partners belong. This highlights that even when countries have varying levels of economic development, geopolitical distance remains a disruptive factor in their trade relations.

Thus, this study sheds light on the importance of considering geopolitical distance in the analysis of bilateral trade relations. The obtained results provide valuable insights for policymakers and economists, underscoring potential challenges related to geopolitical distance and suggesting ways to mitigate its negative effects on international trade.

Appendix A

Figure 6: Global Export share by quartiles/percentiles of bilateral pair geopolitical distance
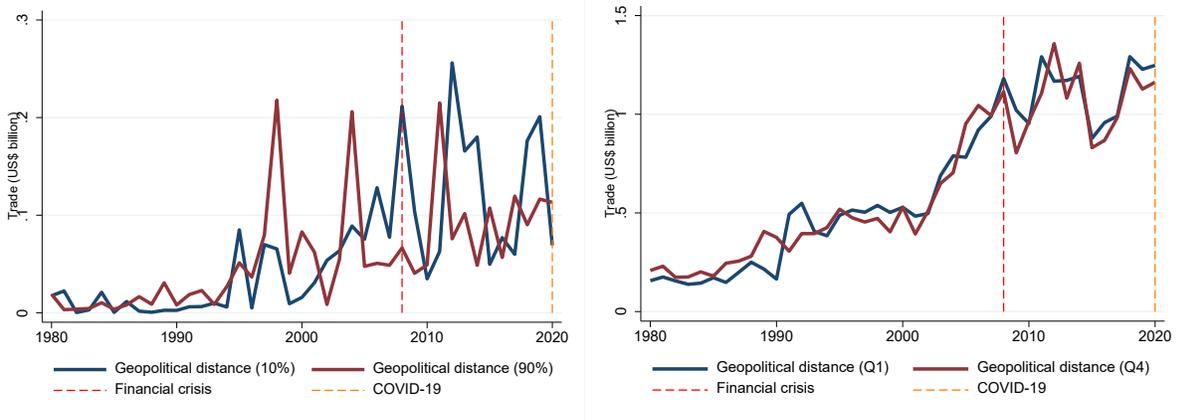
Source: Authors' calculations based on CEPII data.

Figure 7: United States of America Export share by quartiles of geopolitical distance
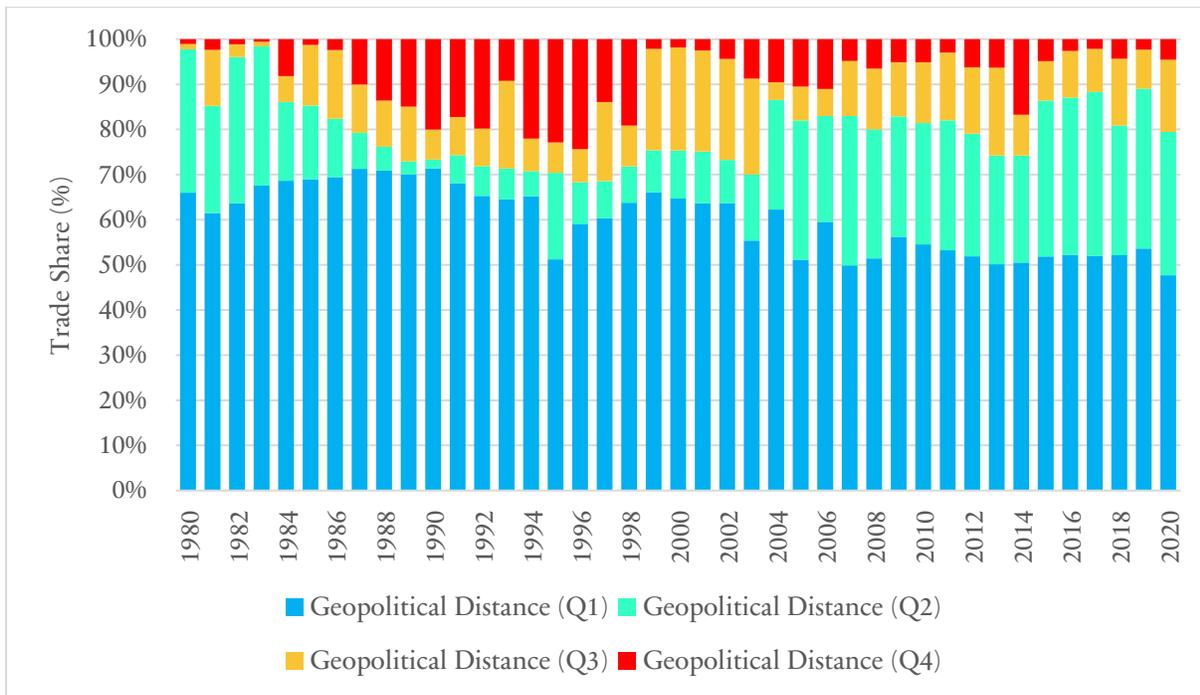
Source: Authors' calculations based on CEPII data.

Appendix A

Figure 8: China's Export share by quartiles of geopolitical distance
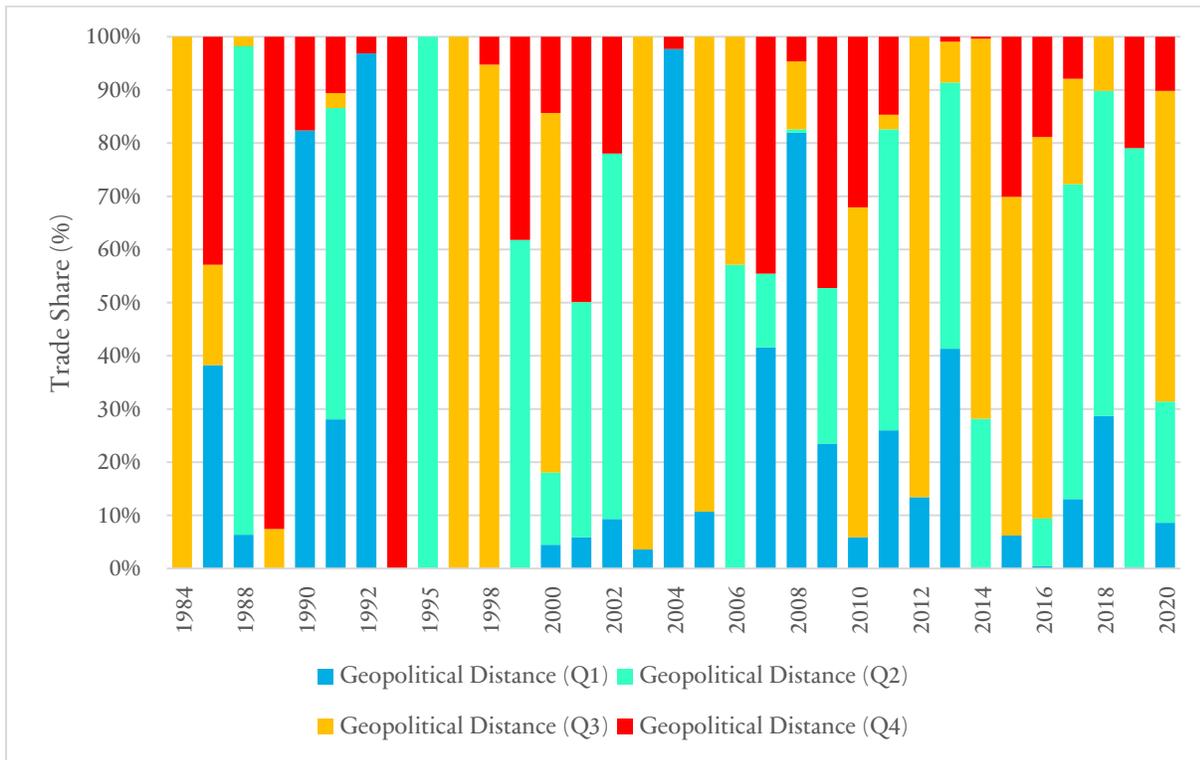
Source: Authors' calculations based on CEPII data.

Figure 9: Russia's Export share by quartiles of geopolitical distance
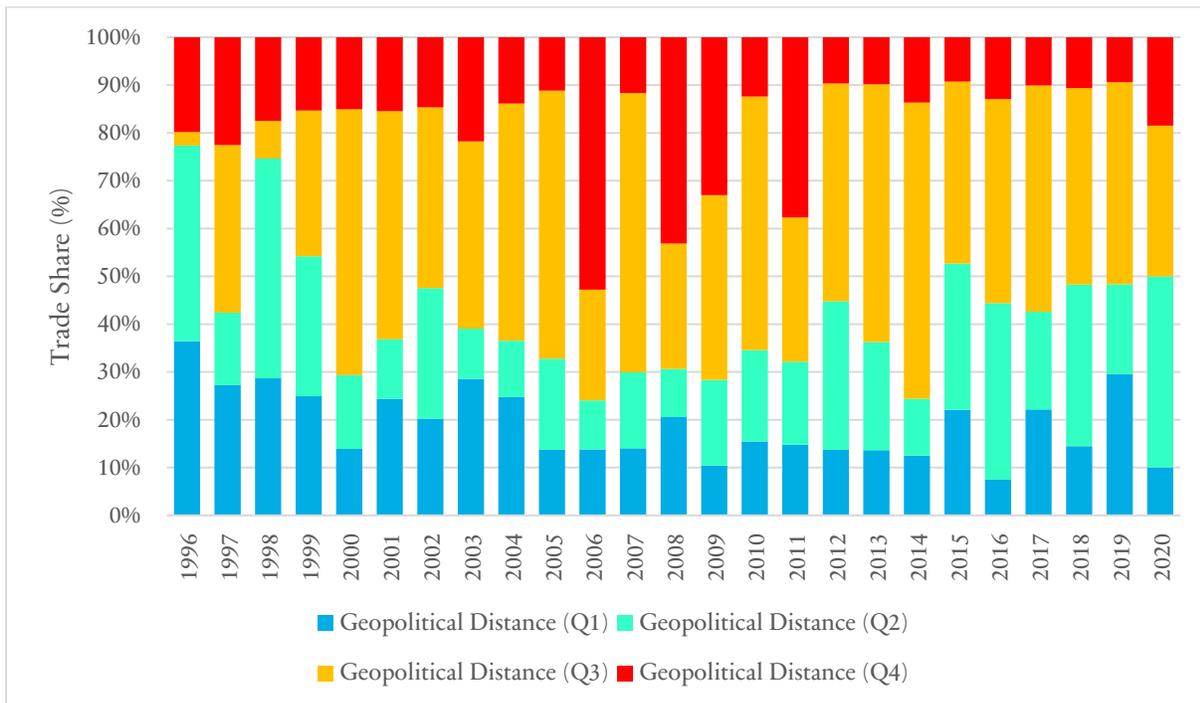
Source: Authors' calculations based on CEPII data.

Figure 10: France's Export share by quartiles of geopolitical distance
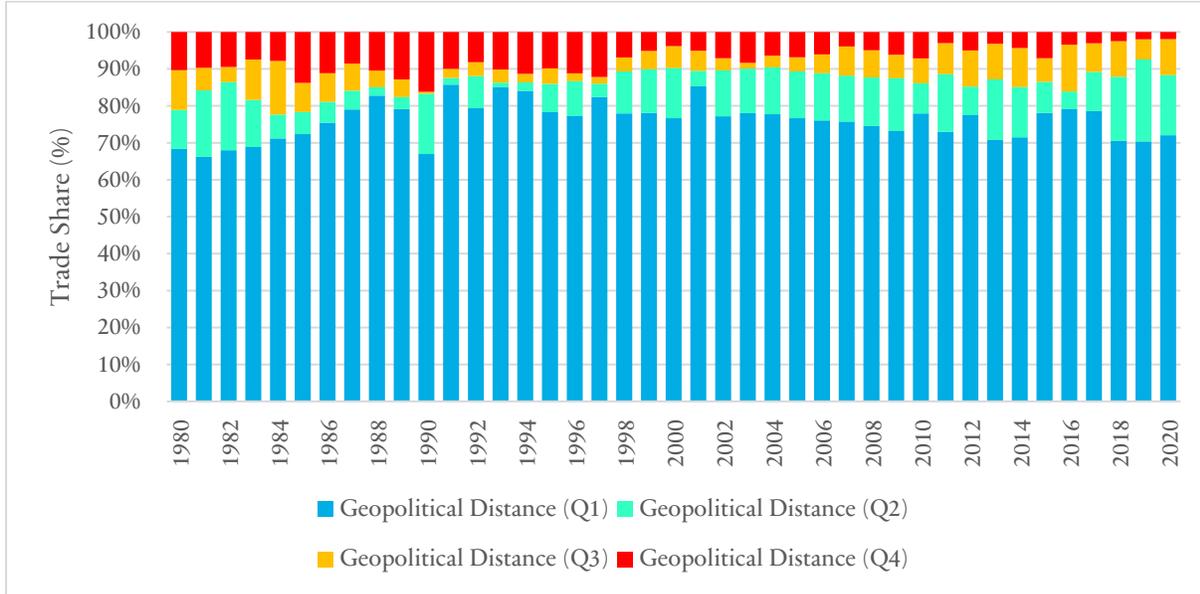
Source: Authors' calculations based on CEPII data.

Figure 11: United Kingdom's Export share by quartiles of geopolitical distance
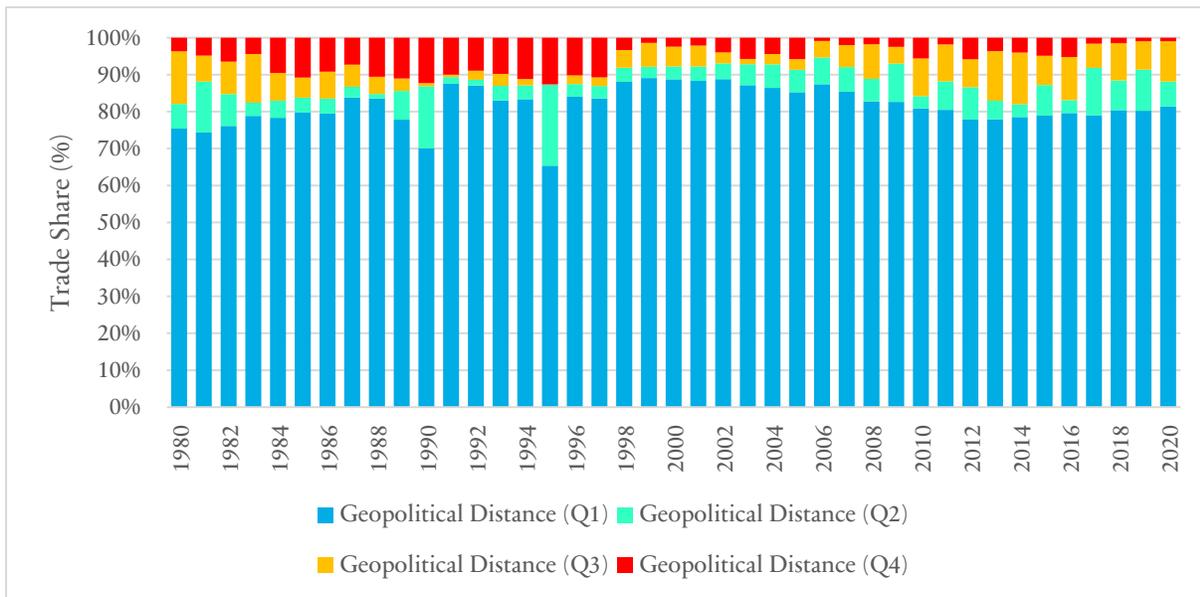
Source: Authors' calculations based on CEPII data.

Appendix A

Table 9 : First stage regressions

```
First-stage regressions
————————————————————————


First-stage regression of lgeopol_dist:

Statistics consistent for homoskedasticity only
Number of obs =                 366727
——————————————————————————————————————————————————————————————————————————
lgeopol_dist │ Coefficient  Std. err.       t     P>|t|    [95% conf. interval]
——————————————┼———————————————————————————————————————————————————————————————
   PolSysdist │  .0071219    .0004731     15.05   0.000     .0061945    .0080492
   lphys_dist │  .4445094    .003342     133.01   0.000     .4379591    .4510597
    lgdpcap_o │  .0213309    .0152736      1.40   0.163    -.0086049    .0512666
    lgdpcap_d │  .1045138    .0135872      7.69   0.000     .0778834    .1311443
       lgdp_o │ -.0614633    .0153909     -3.99   0.000    -.0916289   -.0312976
       lgdp_d │ -.1472534    .0137422    -10.72   0.000    -.1741877   -.1203192
       comcol │ -.4190605    .0087694    -47.79   0.000    -.4362483   -.4018727
        col45 │  .297043     .0227912     13.03   0.000     .2523728    .3417131
  col_dep_ever │ .1006232    .0180143      5.59   0.000     .0653157    .1359307
      col_dep │ -.6862787   1.074904      -0.64   0.523    -2.793059   1.420501
       contig │  .2679492    .0116312     23.04   0.000     .2451524    .2907459
   comlang_off │ -.0771203   .006566     -11.75   0.000    -.0899895   -.0642511
          rta │ -.6730246    .0068082    -98.86   0.000    -.6863684   -.6596808
——————————————————————————————————————————————————————————————————————————

F test of excluded instruments:
  F(  1,366401) =    226.57
  Prob > F      =    0.0000
Sanderson-Windmeijer multivariate F test of excluded instruments:
  F(  1,366401) =    226.57
  Prob > F      =    0.0000



Summary results for first-stage regressions
————————————————————————————————————————————————————————

                             (Underid)              (Weak id)
Variable     | F(  1,366401)  P-val │ SW Chi-sq(  1) P-val │ SW F(  1,366401)
lgeopol_dist │     226.57    0.0000 │     226.77   0.0000 │     226.57

Stock-Yogo weak ID F test critical values for single endogenous regressor:
                              10% maximal IV size             16.38
                              15% maximal IV size              8.96
                              20% maximal IV size              6.66
                              25% maximal IV size              5.53
Source: Stock-Yogo (2005).  Reproduced by permission.
NB: Critical values are for Sanderson-Windmeijer F statistic.

Underidentification test
Ho: matrix of reduced form coefficients has rank=K1-1 (underidentified)
Ha: matrix has rank=K1 (identified)
Anderson canon. corr. LM statistic       Chi-sq(1)=226.63    P-val=0.0000

Weak identification test
Ho: equation is weakly identified
Cragg-Donald Wald F statistic                                 226.57

Stock-Yogo weak ID test critical values for K1=1 and L1=1:
                              10% maximal IV size             16.38
                              15% maximal IV size              8.96
                              20% maximal IV size              6.66
                              25% maximal IV size              5.53
Source: Stock-Yogo (2005).  Reproduced by permission.

Weak-instrument-robust inference
Tests of joint significance of endogenous regressors B1 in main equation
Ho: B1=0 and orthogonality conditions are valid
Anderson-Rubin Wald test          F(1,366401)=   98.60      P-val=0.0000
Anderson-Rubin Wald test          Chi-sq(1)=     98.69      P-val=0.0000
Stock-Wright LM S statistic       Chi-sq(1)=     98.66      P-val=0.0000

Number of observations            N  =      366727
Number of regressors              K  =          13
Number of endogenous regressors   K1 =           1
Number of instruments             L  =          13
Number of excluded instruments    L1 =           1
```

Appendix A


```
IV (2SLS) estimation
────────────────────────


Estimates efficient for homoskedasticity only
Statistics consistent for homoskedasticity only

                                                  Number of obs =    366727
                                                  F( 13,366401) =   9348.37
                                                  Prob > F      =    0.0000
Total (centered) SS    =  2004373.282            Centered R2    =    0.0123
Total (uncentered) SS  =  2004373.282            Uncentered R2  =    0.0123
Residual SS            =  1979652.183            Root MSE       =     2.324
```

ltrade_o	Coefficient	Std. err.	t	P>|t|	[95% conf. interval]	
lgeopol_dist	-1.177668	.1437379	-8.19	0.000	-1.45939	-.8959459
lphys_dist	-.883037	.0643721	-13.72	0.000	-1.009204	-.7568696
lgdpcap_o	-.0028856	.0328814	-0.09	0.930	-.0673323	.0615611
lgdpcap_d	-.0098479	.0339945	-0.29	0.772	-.0764762	.0567804
lgdp_o	.7305074	.0336996	21.68	0.000	.6644571	.7965576
lgdp_d	.5365043	.0372448	14.40	0.000	.4635055	.609503
comcol	.4481083	.0631986	7.09	0.000	.3242409	.5719757
col45	1.742969	.065278	26.70	0.000	1.615026	1.870912
col_dep_ever	.4041963	.0415723	9.72	0.000	.3227158	.4856768
col_dep	-1.231783	2.328095	-0.53	0.597	-5.79478	3.331214
contig	1.318583	.0459176	28.72	0.000	1.228586	1.40858
comlang_off	.5891394	.0180146	32.70	0.000	.5538312	.6244475
rta	-.299304	.0977414	-3.06	0.002	-.4908743	-.1077337

```
Underidentification test (Anderson canon. corr. LM statistic):      226.632
                                             Chi-sq(1) P-val =      0.0000
────────────────────────────────────────────────────────────────────────

Weak identification test (Cragg-Donald Wald F statistic):           226.571
Stock-Yogo weak ID test critical values: 10% maximal IV size          16.38
                                         15% maximal IV size           8.96
                                         20% maximal IV size           6.66
                                         25% maximal IV size           5.53
Source: Stock-Yogo (2005).  Reproduced by permission.
────────────────────────────────────────────────────────────────────────

Sargan statistic (overidentification test of all instruments):       0.000
                                             (equation exactly identified)
────────────────────────────────────────────────────────────────────────

Instrumented:         lgeopol_dist
Included instruments: lphys_dist lgdpcap_o lgdpcap_d lgdp_o lgdp_d comcol col45
                      col_dep_ever col_dep contig comlang_off rta
Excluded instruments: PolSysdist
Partialled-out:       _cons
                      nb: total SS, model F and R2s are after partialling-out;
                          any small-sample adjustments include partialled-out
                          variables in regressor count K
```

Appendix A

Table 10: Hausman test[10]

Coefficients				
(b)	(B)	(b-B)	sqrt(diag(V_b	V_B))
fe	re	Difference	Std. err.	
lgeopol_dist	-.0253095	-.0137936	-.0115159	.0004667
lphys_dist	-.2393017	-1.245517	1.006216	.1379677
lgdpcap_o	.0028035	-.1388271	.1416305	.0143594
lgdpcap_d	-.0533504	-.1341548	.0808044	.0122097
lgdp_o	.7331244	.9362592	-.2031348	.0135678
lgdp_d	.6450702	.6694338	-.0243636	.0120041
col_dep	-.1507039	-.0629633	-.0877405	.
rta	.1934246	.197258	-.0038333	.0012212
b = Consistent under H0 and Ha				
B = Inconsistent under Ha, efficient under H0; obtained from xtreg.				
Test of H0: Difference in coefficients not systematic				
chi2(8) = (b-B)'[(V_b-V_B)^(-1)](b-B)				
=7789.68				
Prob > chi2 =	0.0000			
(V_b-V_B is not positive definite)				

Chapter 3: Geopolitical distance and development aid from ODAC countries

3.1   Introduction

The evolution of the global geopolitical landscape over the past fifteen years has been marked by a series of events that have profoundly influenced power dynamics and international relations. The rise of China, increasing tensions between major powers such as the United States and Russia, as well as humanitarian crises exacerbated by conflicts and climate change, have redefined the modalities and motivations of Official Development Assistance (ODA). In this context, it becomes pertinent to question how member countries of the OECD Development Assistance Committee (DAC) have directed their resources in response to these new realities. In particular, it is crucial to understand if and how geopolitical considerations have influenced ODA allocations in situations such as the Syrian refugee crisis or the COVID-19 pandemic. This conjuncture invites a reconsideration of ODA not only as a humanitarian lever but also potentially as a geopolitical instrument (De Mesquita & Smith, 2009; Dreher et al., 2009; Fuchs & Klann, 2013).

The importance of this study lies in exploring the possible links between the geopolitical preferences of donor countries and the allocation of ODA. While the existing literature has extensively discussed the altruistic motives and economic interests behind aid (Thiele et al., 2007a; Younas, 2008a), few studies have systematically examined the impact of geopolitical considerations on these decisions. This research gap makes an in-depth investigation of aid allocation strategies relevant, in order to discern whether recipient countries are chosen primarily due to their geopolitical ties with donors.

The objective of this thesis is therefore to determine to what extent geopolitical orientations influence the allocation of ODA by DAC countries. To achieve this, a rigorous methodological approach will be adopted, based on a fixed-effects panel, controlling for several factors such as economic relations (including bilateral trade flows and regional free trade agreements), political stability and governance quality (such as government stability and levels of corruption), economic capacity (indicators like GDP per capita and mining rents), colonial ties, and socioeconomic conditions (including levels of unemployment and poverty). The data comes from a bilateral and disaggregated aid database from DAC countries, allowing for detailed and contextualized analysis.

The results of this study reveal complex relationships between donor geopolitical preferences and the allocation of ODA. In particular, the analysis shows that the geopolitical distance between donor and recipient countries can significantly influence ODA flows, notably through channels such as NGOs, civil

society, and public institutions. The findings suggest that countries geopolitically closer to donors tend to receive a larger share of ODA, illustrating the potential strategic role of aid as an instrument of power and international influence.

The structure of this paper will unfold as follows: an extensive literature review will present the relevant theories and prior studies, followed by a discussion on theoretical concepts and aid transmission channels. The methodological section will detail the chosen approach for data analysis. The results will then be presented and thoroughly discussed, exploring not only general trends but also specific cases that illustrate divergences or confirmations of the proposed hypotheses. Finally, the study will examine the robustness of the results through different specifications and identify heterogeneities among donor and recipient countries. The conclusion will summarize the main findings and propose implications for aid policies as well as for future research agendas.

3.2   Background

The allocation of development aid has been the subject of numerous studies seeking to understand the complex motivations guiding donors. While aid is officially justified by humanitarian and development objectives, in-depth analysis reveals that it also responds to geopolitical and economic strategies. This chapter explores these dynamics, examining how DAC countries allocate their aid based on factors such as recipients' needs, institutional quality, commercial interests, and geopolitical considerations. The goal is to disentangle altruistic motivations from strategic ones in aid flows.

Recipients' Needs as a Stated Criterion

Historically, development aid has been justified by the desire to address the economic and social needs of poor countries. (Boone, 1996) shows that a 1% decrease in GDP per capita is associated with a 0.035% increase in aid as a proportion of GDP, highlighting the importance of economic needs in aid allocation. Similarly, (Neumayer, 2003) observes that low-income countries receive an increased share of multilateral aid, reflecting apparent sensitivity to economic needs.

However, these criteria do not fully explain aid flows. (Bermeo, 2017) finds that decreases in GDP per capita lead to increased aid, but with variability among donors. Moreover, human development needs, such as infant mortality, also influence aid allocation. (Younas, 2008b) shows that a 1% increase in infant mortality results in a 0.35% rise in per capita aid. Nevertheless, these needs are not always prioritized by donors, as highlighted by (Thiele et al., 2007b), who identify disparities in funding for essential sectors such as health and education.

Institutional Quality, Human Rights, and Governance

The quality of institutions and respect for human rights are important criteria in aid allocation, though their impact is ambivalent. (Carey, 2007) demonstrates that countries with poor institutional quality receive 60% less aid from Germany, though this effect is less significant for other donors. (Winters & Martinez, 2015) emphasize that improved governance increases the share of budgetary aid allocated to recipient countries.

However, human rights violations do not always lead to reduced aid. (Lebovic & Voeten, 2009) find that condemnations for human rights violations at the UN reduce World Bank loans by 0.28%, but have no significant effect on bilateral aid. (Dreher, Fuchs, et al., 2022) observe that Chinese loans decrease with declining institutional quality in recipient countries, but without a direct link to human rights.

Commercial and Economic Interests

Donors' commercial interests play a central role in aid allocation. (Alesina & Dollar, 2000) show that a 1% increase in bilateral trade relations predicts a 0.45% rise in aid. Hoeffler and Outram (2011) confirm that the intensity of trade links increases aid from DAC countries by 0.46%. (Bayramoglu et al., 2023) emphasize that donor exports are a key predictive factor, even in climate aid.

In contrast, China adopts a different approach. (Dreher, Fuchs, et al., 2022) show that Chinese aid is less influenced by trade relations and more oriented toward strategic objectives, such as adherence to the One-China policy. This distinction highlights divergences between traditional donors and emerging ones.

International Politics and Geopolitics

Geopolitical considerations also influence aid flows. (Alesina & Dollar, 2000) demonstrate that alignment in UN voting is a significant predictor of aid flows. (Hoeffler & Outram, 2011) observe that a one-standard-deviation increase in voting alignment with the United States leads to a 76% rise in aid.

Furthermore, participation in the UN Security Council (UNSC) strongly correlates with increased aid. (Dreher et al., 2009) find that temporary UNSC membership increases World Bank-funded projects by 73% compared to non-members. This dynamic illustrates the use of aid as a power lever in international relations.

Migration, Peace, and Regional Stability

Migration crises and conflicts also influence aid allocation. (Bermeo & Leblang, 2015) show that each additional migrant arriving in a DAC country increases aid to their origin country by USD 242. Similarly, (Czaika & Mayer, 2011) reveal that a one-standard-deviation increase in asylum seekers predicts a 110% rise in development aid and a 238% rise in emergency aid. Conversely, (Clemens & Postel, 2018) find that migration pressure does not always have a direct link to migration-specific aid.

During conflicts, donors adapt their strategies. (Balla & Reinhardt, 2008) show that conflicts intensify aid to neighboring states, though this effect varies among donors. (Fleck & Kilby, 2010) find that the United States increases aid to strategic countries during the war on terror, but reduces support elsewhere.

These studies highlight the multiple determinants of aid, ranging from humanitarian needs to strategic and geopolitical considerations. However, the interactions between these factors remain underexplored in the case of DAC countries. By emphasizing the use of an innovative measure of geopolitical alignment, such as geopolitical distance, and a disaggregated database revealing the different aid channels used by DAC countries, this study offers a novel perspective to disentangle altruistic from strategic motivations, contributing to a better understanding of aid flows in a global context of power competition.

3.3 Theoretical Framework of Official Development Assistance in a Geopolitical Context

ODA was established with the primary objective of addressing humanitarian needs and promoting development in countries facing challenges. However, previous research has suggested that ODA might also be influenced by strategic or geopolitical considerations. To explore this possibility, this section examines three theoretical approaches (realism, neo-realism, and idealism) to establish an analytical framework for understanding the geopolitical motivations behind ODA. These perspectives help clarify whether and to what extent geopolitical factors, such as the "geopolitical distance" between donors and recipients, might influence the distribution of ODA.

3.3.1 The Realist Approach: Economic and Diplomatic Influence

Realism, a theory grounded in the works of thinkers such as Hans Morgenthau, and Niccolò Machiavelli, views the state as a rational actor primarily driven by the pursuit of power and the defense of national interests (Machiavelli, 1993; Morgenthau, 1948). From a realist perspective, ODA is far from a purely altruistic gesture; it constitutes an extension of foreign policy through which donor countries seek to maximize their influence in recipient regions. This influence is exerted not only by supporting local governments but also by fostering profitable economic relationships.

A prominent example is U.S. aid to South Korea during the 1950s. Amid the Cold War, U.S. assistance aimed to contain the expansion of communism by supporting a capitalist regime in a strategically critical region

(Alesina & Dollar, 2000). This aid also facilitated U.S. exports, particularly agricultural products, by introducing American goods into the South Korean market. This dual-purpose strategy consolidated economic support while securing political alliances and access to new markets.

In this study, the realist approach leads to the hypothesis that DAC countries prioritize geopolitically significant destinations, focusing their efforts on regions where they can enhance their economic presence and influence. Donors might use ODA to secure markets or exploit investment opportunities, often undermining the neutrality of their stated aid policies.

3.3.2   The Neo-Realist Approach: ODA as a Security Tool

Neo-realism, or structural realism, developed by Kenneth Waltz, introduces a security-centered perspective on ODA (Waltz Kenneth, 1979). This approach argues that states seek to maintain their security by ensuring the stability of strategic regions and strengthening alliances with allied regimes. Unlike classical realism, which focuses on the state as the sole actor, neo-realism emphasizes the role of the international system's structure in shaping state decisions. Within this framework, ODA becomes a tool for mitigating instability in sensitive areas by contributing to institutional development and recipient state security.

A notable example is the redefinition of U.S. ODA following the events of September 11, 2001. Aid to allied countries in the "War on Terror" became a strategic priority. Nations such as Pakistan and Afghanistan received substantial increases in U.S. aid, aimed at supporting allied regimes in a region crucial to U.S. security interests (Dietrich, 2013). This use of ODA reflects a strategy where aid is conditional on security objectives, redirecting funds to countries aligned with the donor's security priorities.

In this study, the neo-realist approach supports the hypothesis that DAC donors allocate more aid to geopolitical allies, particularly in sensitive regions where instability could threaten their security interests. Consequently, countries geopolitically close to donors are likely to receive more ODA due to their role in the donors' national security strategies.

3.3.3   The Idealist Approach: Altruistic Assistance

The idealist approach, often associated with thinkers like Woodrow Wilson[11], views ODA as an expression of altruism and international solidarity, with aid distributed in response to humanitarian and ethical needs,

---

[11] The 28th President of the United States (1913–1921), Wilson is widely recognized for promoting idealism in international relations, particularly through his **Fourteen Points** (1918). He advocated for the creation of the League of Nations, emphasizing principles of international cooperation, the rule of law, and lasting peace. His ideas reflect a vision where international relations are guided by moral values and global progress, in contrast to realist theories.

independent of donor strategic interests. Idealists perceive ODA as a means to promote universal values such as democracy, human rights, and economic development. This approach emphasizes the moral responsibility of states to assist the most vulnerable countries, aiming primarily to reduce inequalities and alleviate global suffering.

From this perspective, some donors justify their ODA programs based on humanitarian principles, emphasizing that their aid responds to humanitarian crises, supports sustainable development, and improves living conditions, regardless of geopolitical considerations. The significant share of funding channeled through multilateral organizations and NGOs illustrates this humanitarian commitment, where funds are allocated based on population needs rather than political alliances.

This approach inspires the third hypothesis of this study: ODA is guided by the needs of populations in developing countries, adhering to a logic of international solidarity free from geopolitical bias. In other words, DAC countries might distribute aid based on the actual needs of recipient countries rather than their geopolitical positioning.

These three theoretical frameworks illuminate the potential motivations behind DAC countries' ODA distribution decisions. By formulating hypotheses aligned with each approach (ODA as an economic lever (realism), as a security tool (neo-realism), and as a humanitarian response (idealism)).

3.4   Geopolitical Transmission Channels of ODA

While section 3.1 provided a theoretical lens for understanding ODA motivations, this section explores the practical channels through which these geopolitical considerations manifest in aid distribution. Political, economic, military, and cultural dynamics play key roles in translating theory into action.

3.4.1   Political and diplomatic channels

ODA plays a crucial role in shaping the policies and diplomatic alignments of recipient countries. This influence is often exerted through conditions tied to the aid, which may include political reforms or the adoption of foreign policies aligned with the interests of the donor country. Theoretical approaches such as realism, neo-realism, and idealism provide valuable insights into the functioning of these political and diplomatic channels, as well as the motivations behind them.

3.4.1.1   Direct Political Influence through Conditional Aid

In a realist perspective, ODA conditionality is a strategic tool enabling donors to maximize their political influence. The realist approach, inspired by the works of Hans Morgenthau, views the state as a rational actor driven by the pursuit of power and the defense of national interests. Conditional aid (focused on reforms such as improving governance, promoting transparency, and combating corruption) aligns the political agendas of recipient countries with those of donors, while strengthening their positions on the global geopolitical chessboard (Alesina & Dollar, 2000).

For instance, during the Cold War, the United States extensively used conditional aid to support governments aligned with its anti-communist agenda. This strategy anchored the policies of recipients within the capitalist bloc, countering Soviet influence. Similarly, member countries of the OECD's Development Assistance Committee often condition their aid on reforms reflecting their ideological and strategic priorities (Berthélemy, 2006).

From a neo-realist perspective, such conditionality reflects the structural logic of the international system, where states aim to maintain stability and security. ODA thus becomes a means to mitigate regional instability that could threaten donor security interests. For example, following the September 11 attacks, U.S. aid to Pakistan and Afghanistan was closely tied to their strategic roles in the "war on terror" (Dietrich, 2013). These aid flows, while officially aimed at development objectives, were conditioned on counter-terrorism measures aligned with U.S. priorities.

Idealism, on the other hand, interprets ODA conditionality as an expression of donor commitment to universal values such as democracy and human rights. From this perspective, conditional aid acts as a catalyst for sociopolitical transformation and ethical governance in recipient countries (Burnside & Dollar, 2000). For instance, the European Union has often conditioned its aid on the implementation of democratic reforms and respect for human rights, framing these requirements as a moral duty rather than a strategic necessity (Carey, 2007).

However, such conditionality raises questions about the sovereignty of recipient nations. While idealism emphasizes the importance of promoting good governance, critics highlight the power imbalances inherent in these arrangements. Recipients may be compelled to adopt policies dictated by donors, thus compromising their political autonomy (Nye Jr, 2003).This tension underscores the duality of conditional ODA: a tool serving both altruistic and strategic objectives.

3.4.1.2   *Aid diplomacy: strategic influence in international decision-making*

Aid diplomacy illustrates how donors leverage ODA to shape global political alignments and promote their foreign policy agendas. From a realist perspective, aid is a transactional tool used to secure the loyalty of

recipient countries on the international stage, such as at the United Nations. Empirical studies, such as those by (Dreher et al., 2009), show that countries receiving significant aid from donors are more likely to align their votes with those of the donor country in the United Nations General Assembly. This strategic alignment enables donors to amplify their influence on critical global issues, ranging from security interventions to trade negotiations.

Neo-realism adds depth to this analysis by emphasizing the structural imperatives of the international system. Donors use ODA to solidify alliances and balance power dynamics in strategically sensitive regions. For instance, during votes on sanctions or military interventions, aid is often directed to countries whose support is crucial for the donor's geopolitical objectives. This behavior reflects a broader strategy aimed at maintaining systemic stability while preserving the donor's position in the international hierarchy (Fuchs & Klann, 2013).

In contrast, idealism views aid diplomacy as a means to foster multilateral cooperation and international solidarity. This perspective sees ODA as a lever to build consensus around global challenges, such as climate change or health crises, by promoting shared values and collaborative solutions. Multilateral institutions, often supported by DAC donors, play a central role in this approach, providing a platform for equitable decision-making (Santiso, 2001).

However, the ethical and political implications of aid diplomacy deserve careful scrutiny. Critics argue that these practices can create dependency, where recipient countries feel compelled to support donor positions in exchange for financial aid (Dreher & Fuchs, 2015). This dynamic not only compromises the sovereignty of recipients but also risks delegitimizing ODA as a genuinely altruistic effort. Furthermore, the idealistic veneer can obscure the strategic calculations that often underpin aid diplomacy, blurring the line between altruism and realpolitik.

3.4.2   Economic channels: aid as an economic and strategic lever

The economic channels of ODA reflect a complex interplay between the strategic interests of donors and the development objectives of recipient countries. From a realist perspective, ODA is a strategic tool to secure access to critical resources and significant markets. Infrastructure projects, such as the construction of dams or the development of transportation networks, not only stimulate local economic growth but also strengthen the presence of donor countries' businesses in strategic regions (Alesina & Dollar, 2000).

This logic extends into a neo-realist framework, where ODA is seen as a means to stabilize sensitive regions and mitigate economic and security risks. By financing economic projects in critical sectors, donors aim to prevent global disruptions that could affect their supply chains or investments. For example, the redirection

of aid following the 2008 financial crisis sought to bolster emerging economies to limit global economic contagion.

However, the idealist approach provides a different perspective on these dynamics. In this view, ODA is designed to reduce economic inequalities and promote sustainable and equitable development. Microfinance programs and investments in education or healthcare, often championed by donors, aim to empower vulnerable communities while reflecting universal values of justice and solidarity.

Despite these objectives, the economic dependency created by ODA raises questions about the sovereignty of recipient countries. While realism views this dependency as a strategic lever for donors, idealism emphasizes the need to build local capacities to ensure autonomous development. Thus, although the economic channels of ODA embody altruistic aspirations, they are often intertwined with complex geopolitical logics that reveal donor interests.

3.4.3   Military and Security Channels: Development Aid and Security Strategies

The military and security channels of ODA demonstrate how aid can be mobilized to achieve geopolitical and strategic objectives. From a realist perspective, ODA serves to enhance the military strength of donor allies. This is often achieved through the training of armed forces, the provision of equipment, or logistical support. For instance, U.S. military aid to countries like Israel or Egypt aims to maintain strategic influence in geopolitically sensitive regions (Hook, 2015). Such interventions also help consolidate alliances that align with the donor's global interests.

From a neo-realist standpoint, these interventions align with a logic of regional stabilization. By supporting allied regimes, ODA helps contain threats to international security, whether in the form of terrorism, cross-border conflicts, or mass migrations. A notable example is aid to Sahel countries, where donors aim to counter the expansion of armed groups while stabilizing a region critical to their security interests. This approach reflects a structural concern, where donors, influenced by international system dynamics, seek to minimize risks that could impact their own interests.

Idealism, on the other hand, interprets these channels as instruments for promoting peace and global security. Humanitarian aid and post-conflict interventions are justified by a desire to alleviate human suffering and restore institutions capable of ensuring long-term stability. For example, ODA-funded reconstruction missions in conflict-affected regions, such as Afghanistan, are often portrayed as altruistic efforts to rebuild an international order based on cooperation and solidarity.

However, these interventions raise questions about the intersection of strategic and humanitarian interests. While realism and neo-realism emphasize the primacy of donors' security interests, idealism highlights the limitations of these approaches when they undermine recipient countries' autonomy or foster security dependencies. Thus, although the military and security channels of ODA may appear altruistic, they often reflect geopolitical priorities that go beyond mere development objectives.

3.4.4 Cultural and Social Influence: Shaping Values and Elites through ODA

The cultural and social channels of ODA play a central role in transmitting values such as democracy, human rights, and market economies. From a realist perspective, these initiatives are seen as instruments of influence aimed at aligning recipients with the strategic interests of donors. By supporting educational or cultural programs, donors shape local elites according to their norms, thus ensuring the continuity of their political and cultural influence. For instance, scholarships granted to foreign students to study at Western universities help establish networks of cooperation favorable to the donors.

From a neo-realist perspective, these channels are also used to strengthen international stability by promoting political systems compatible with global power structures. By investing in education or civil society, donors seek to create social environments conducive to stable and predictable governance, thereby reducing the risks of regional instability or the emergence of movements contrary to their interests.

Idealism, on the other hand, emphasizes the goal of encouraging societal reforms to promote universal values such as justice, solidarity, and cooperation. From this perspective, ODA aims to reduce social inequalities and strengthen local capacities by supporting projects in education, health, or minority rights. For example, programs that promote girls' education in marginalized regions reflect a desire for social transformation focused on human development.

However, these efforts have been criticized for their impact on the cultural autonomy of recipients. While realism and neo-realism highlight the strategic interests of donors, idealism faces the challenge of respecting cultural diversity while pursuing development objectives. In practice, these initiatives, although altruistic in appearance, may be perceived as forms of neo-colonialism, imposing cultural and economic models originating from donor countries.

Ultimately, the cultural and social channels of ODA illustrate the tension between the ideal of international cooperation and strategies of geopolitical influence. While they often aim to improve the living conditions of local populations, they also reflect donors' priorities in shaping a global order that favors their interests.

3.5 Data and Methodology

3.5.1 Data

3.5.1.1 Variables of Interest

Official Development Assistance

For this study, we use disaggregated data on ODA provided by the OECD's Development Assistance Committee for the period from 2002 to 2021. The variable "aid" used in this study is derived from the DAC database, which covers ODA flows from donor countries to eligible countries and territories. The data are expressed in millions of constant U.S. dollars, adjusted to 2022 prices to neutralize the impact of inflation and allow for reliable year-over-year comparisons.

The donors included in this analysis are all DAC member countries (Table 25 : List of countries), allowing for a comprehensive evaluation of aid from these countries. All sectors are taken into account, ensuring global coverage without sectoral restrictions. The aid flows analyzed are classified as official development assistance, ensuring that only contributions recognized for their concessional nature and development objectives are included.

The data are grouped under different transmission channels, allowing for the analysis of the mechanisms through which aid is delivered to beneficiaries. The transmission channel categories are defined as follows:

Public Sector Institutions include central, state, or local government departments (e.g., municipalities) and public enterprises in donor or recipient countries. Public enterprises are corporations controlled by the government, either by owning more than half of the voting shares or through special legislation allowing the government to determine the company's policy or appoint its directors. This category also includes delegated cooperation, where a donor delegates the implementation of an activity to another donor country.

Non-Governmental Organizations (NGOs) and Civil Society include any non-profit entity in which individuals organize at a local, national, or international level to pursue shared goals without significant government participation or representation. NGOs include foundations, cooperatives, trade unions, and ad hoc entities created to raise funds for specific purposes. Umbrella NGOs and NGO networks are also included. NGOs are classified as international if they have an international coordinating body or an extensive network of regional or national offices and diversified international revenue sources.

Public-Private Partnerships (PPPs) and Networks are collaborative arrangements between private actors and bilateral/multilateral agencies or governments to address specific development issues. A PPP is an operational partnership whose board of directors or other governance structure includes public officials and private individuals. A network is a global or regional organization that supports and brings together public, private, and civil society organizations with similar goals to facilitate knowledge sharing.

Multilateral Organizations are international institutions with government members. They include organizations for which donor contributions can be reported entirely or partially as multilateral ODA, as well as organizations that serve solely as channels for bilateral ODA.

The **"Other"** category includes "for-profit" institutions, consultants and consulting firms, universities, colleges and other educational institutions, research institutes, think tanks, and any other implementers that cannot be classified under another transmission channel category.

These diversified transmission channels allow for an understanding of how aid is administered and deployed, offering insights into the strategic use of ODA by DAC donor countries.

Geopolitical Distance

We use "geopolitical distance" as a key measure to assess alignment and friendship between nations. This variable, developed by (Bailey et al., 2017), is calculated based on recorded votes in the United Nations General Assembly from 1946 to 2021, allowing for an analysis of countries' geopolitical preferences over time.

"Geopolitical distance" is obtained by first estimating an ordered logit model for the three voting outcomes (for, abstain, against) based on country-specific latent preferences for each year. These latent preferences are estimated using a Bayesian method, involving the use of the Metropolis-Hastings/Gibbs sampling algorithm to infer the preference parameters and their posterior distribution.

The distance between two countries for a given year is then calculated as the absolute difference between their voting preference parameters. A large distance suggests divergence in geopolitical interests, while a smaller distance indicates convergence, reflecting similar geopolitical interests between states.

This measure provides a deep and nuanced perspective on the dynamics of international relations by capturing trends and shifts in foreign policies through UN voting behavior. It enriches international relations analyses by helping to decode alliance structures and potential conflicts while providing a solid foundation for policymakers and researchers interested in diplomatic interactions and strategic alignments.

3.5.1.2   Control Variables

To isolate the effect of ODA as a potential instrument of geopolitical influence while accounting for the various economic and political factors that may affect relations between donor and recipient countries, we include several control variables.

Trade Flows: Represented by bilateral trade exchanges in thousands of U.S. dollars, these data from "Comtrade" capture the intensity of economic relations between countries. A high volume of bilateral trade between a donor and a recipient country may indicate robust economic relations, which can influence the distribution and orientation of ODA. Intense trade relations may reflect economic interdependence that could guide aid priorities (Alesina and Dollar, 2000).

Government Stability: Measured by the International Country Risk Guide (ICRG), this variable assesses the government's ability to maintain stability and implement its agenda. Political stability in recipient countries is crucial as it ensures an environment conducive to the effective use of ODA. Donors are more likely to provide aid to countries where government stability reduces the risks of inefficiency and corruption (Svensson, 1999).

GDP per Capita: This economic indicator, provided by the World Bank, measures the economic capacity of recipient countries. A more developed economy is often seen as more capable of absorbing and effectively using ODA. Additionally, this indicator allows us to control for the effect of the economic capacity of recipient countries on attracting aid (Alesina and Dollar, 2000).

Regional Free Trade Agreements: Integration into trade agreements, documented by the WTO, can facilitate trade and investment. The existence of free trade agreements may indicate strong and stable international economic relations, positively influencing donor countries' decisions to provide ODA to these countries (Baier & Bergstrand, 2007).

Mining Rents: Measured by the World Bank. This variable indicates the share of rents from natural resources in total GDP. Countries rich in natural resources may receive ODA for strategic reasons, as access to these resources is often crucial for donors. (Arezki et al., 2024) suggests that countries discovering natural resources receive more aid, indicating an underlying geopolitical influence on these allocations.

Corruption: Corruption, measured by the ICRG, can reduce the effectiveness of aid. A study by (Neumayer, 2003b) indicates that corruption erodes confidence in governmental effectiveness, which could discourage the allocation of aid to the most corrupt countries. A high level of corruption can complicate the effective implementation of ODA, introducing instability and reducing transparency (Burnside & Dollar, 2000).

Socioeconomic Conditions: These indicators reflect socioeconomic challenges such as unemployment and poverty. Adverse socioeconomic conditions may limit the effectiveness of ODA by creating an unstable environment for development projects. Donors may use this information to assess risks and opportunities in recipient countries (Chauvet & Guillaumont, 2004).

Colonial Ties: This variable captures historical colonial relationships between donor and recipient countries, based on historical records of colonial rule. Colonial ties often foster enduring cultural, linguistic, and institutional connections that can influence ODA allocations. Donor countries may exhibit a preference for providing aid to former colonies, as these nations often maintain closer political and economic relations, facilitating the alignment of development agendas and aid priorities. Studies such as (Alesina and Dollar, 2000) highlight that former colonial powers frequently allocate more aid to their former colonies, suggesting an enduring geopolitical influence rooted in historical connections (Weiler et al., 2018).

Table 11: : Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Geopolitical distance	34707	1.532	.666	0	4.572
Total Aid Across All Channels (millions USD)	24954	25.577	154.826	-16.353	16240.93
Aid via Multilateral Organizations (millions USD)	10388	6.843	19.667	-1.629	453.379
Aid via NGOs & Civil Society (millions USD)	19906	5.838	21.13	-.166	708.595
Aid via Unreported Channels (millions USD)	4242	21.214	119.435	-5.815	3203.576
Aid via Other Channels (millions USD)	8501	8.309	104.43	-18.419	7896.903
Aid via Public-Private Partnerships (millions USD)	1468	.805	2.951	-.051	83.781
Aid via Public Sector Channels (millions USD)	18288	15.801	95.561	-13.016	7225.164
Aid via Sector Institutions (millions USD)	2586	9.559	28.282	0	341.493
GDP per Capita (constant USD)	34210	3.843	4.31	.108	25.962
Population (in millions)	34513	37798.313	137840.86	1285.318	1393409.1
Government Stability (index)	24081	7.687	1.388	4.458	11.083
Socioeconomic Conditions (index)	24081	4.327	1.773	0	10
Corruption Level (index)	24081	2.083	.693	0	4.5
Colonial Ties (binary)	34713	.021	.145	0	1
Regional Trade Agreement (binary	34713	.178	.383	0	1
Bilateral Trade Flow (thousands	26498	.048	.451	0	21.401
Mineral Rents (% of GDP)	34242	1.537	3.259	0	28.249

3.5.2 Methodology

For this study, we adopt a fixed-effects panel model to analyze the impact of geopolitical factors on ODA flows from DAC countries. The use of a fixed-effects model allows us to control for unobservable and time-invariant characteristics of each recipient country, thereby isolating the effect of the explanatory variables on ODA flows.

The specification of the model is as follows:

$$ln(AID_{ijt}) = \alpha + \beta_1 \cdot Geopodistance_{ijt} + \beta_2 \cdot Trade_{ijt} + \beta_3 \cdot ln(GDPpc_{it}) + X'_{ijt}\beta + \mu_i + \lambda_j + \tau_t + \varepsilon_{ijt}$$

where:

$ln(AID_{ijt})$ represents the logarithm of bilateral aid flows from donor country j to recipient country i in year t. The variable $Geopodistance_{ijt}$ captures the geopolitical distance between the donor and the recipient, based on ideal point estimates derived from voting similarity at the United Nations General Assembly. $Trade_{ijt}$ denotes the bilateral trade flows between countries i and j, while $ln(GDPpc_{it})$ is the logarithm of the recipient country's GDP per capita. The term $X'_{ijt}\beta$ corresponds to a vector of control variables, including the recipient country's population, political stability, socioeconomic resilience, corruption, colonial ties, regional trade agreements, bilateral trade flows, and natural resource rents. The model also includes recipient-country fixed effects μ_i, donor-country fixed effects λ_j, and year fixed effects τ_t, which account for unobserved heterogeneity across countries and over time. Finally, ε_{ijt} is the idiosyncratic error term.

Endogeneity

In analyzing the geopolitical impact of ODA, considering the problem of endogeneity is essential, particularly due to the simultaneity bias that arises when the variable of interest, here ODA, is correlated with the error term in our regression model. This correlation can lead to biased estimates and affect the validity of our conclusions.

ODA could influence geopolitical dynamics in various ways. For example, by targeting strategic sectors in recipient countries, donors might strengthen their political and economic influence. Significant aid could alter the political orientations of the recipient country, bringing it closer to the donor country or reinforcing strategic alliances. Conversely, geopolitical proximity might determine the amounts of ODA allocated, with donor countries being more inclined to support countries with which they share common interests.

To mitigate this endogeneity problem, we use the one-year lagged geopolitical distance as an instrumental variable. This approach is based on the idea that past geopolitical positions influence current decisions regarding ODA, while being less likely to be directly influenced by contemporary aid flows. By using the previous year's geopolitical distance, we reduce the risks of simultaneity, clarify the direction of causality, and improve the precision of the estimates. (Dreher & Langlotz, 2020) demonstrated how the use of exogenous instruments, such as past variations in geopolitical relations, can provide a more accurate estimate of the effect of aid on political and economic dynamics.

Additionally, we adopt an instrumental variable approach to address endogeneity. This method uses the difference in political systems between the countries in the bilateral pair as an instrument. The measurement of these systems is obtained through the polity2 score, which differentiates democracies from autocracies. The difference in polity2 scores between countries is used as an instrument since it allows the identification of democratic and authoritarian regimes. The idea is to determine the impact of external changes in geopolitical distance on ODA[12]. We rely on the changes induced by differences in the governance system in place in the bilateral pair countries as an instrument. These systems are generally the result of long histories and cultural factors, making this instrument exogenous and exclusive. The only way in which differences in governance systems can influence ODA is through their impact on relations between countries. (Acemoglu & Robinson, 2013), in their book "Why Nations Fail: The Origins of Power, Prosperity, and Poverty," discuss the impact of political institutions on economic performance and international relations. They show that differences in governance systems, between democracies and autocracies, significantly influence geopolitical dynamics, which justifies the use of these differences as an instrument to model geopolitical distance. Similarly, (Besley & Kudamatsu, 2006), in "Health and Democracy," emphasize that the nature of the regime can have tangible effects on international relations, including ODA, reinforcing the idea that these institutional differences constitute a valid instrument for analyzing ODA. Furthermore, (Dreher et al., 2008), in their article "Does US aid buy UN General Assembly votes? A disaggregated analysis," use political differences to study how foreign aid is influenced by geopolitical dynamics, thereby supporting the idea that these differences are relevant for addressing endogeneity in ODA analysis.

These approaches, by combining the use of lagged data and instrumental variables based on political characteristics, strengthen the methodological rigor and validity of conclusions about the geopolitical impact of ODA. They allow us to more clearly distinguish the direct effects of ODA from other geopolitical and economic dynamics that influence international relations.

---

[12] The variations in geopolitical distance mentioned here refer to changes that are not directly influenced by Official Development Assistance flows. For instance, an ideological divergence between a democratic regime and an authoritarian regime in a pair of countries can increase geopolitical distance. Such differences, independent of aid policies, often result from historical and cultural legacies or strategic conflicts and provide a basis for evaluating their impact on ODA without introducing endogeneity bias.

3.6   Results and Discussions

3.6.1   Impact of Geopolitical Distance on Different Aid Channels

In this section, we test the hypothesis that geopolitical distance differentially influences the flows of ODA depending on the channels through which this aid is distributed. Specifically, we seek to determine whether countries with greater geopolitical proximity to donors receive higher volumes of aid through specific channels, such as governmental, non-governmental, or multilateral channels.

Chapter 3: Geopolitical distance and development aid from ODAC countries

Table 12 : Baseline results of the regressions of geopolitical distance on the different aid channels

	(Log of Total Aid Across All Channels)	(Log of Aid via Multilateral Organizations)	(Log of Aid via NGOs and Civil Society)	(Log of Aid via Unreported Channels)	(Log of Aid via Other Channels)	(Log of Aid via Public-Private Partnerships)	(Log of Aid via Public Sector Channels)	(Log of Aid via Sector Institutions)
Geopolitical distance	-0.0550***	-0.0201	-0.0910**	-0.0280	-0.0241	-0.104	-0.0276	0.316
	(0.0203)	(0.0567)	(0.0396)	(0.0765)	(0.0282)	(0.0710)	(0.0244)	(0.391)
Log of GDP per Capita (Destination Country)	-0.0736***	-0.252***	0.0206	-0.0138	-0.0482	0.259*	-0.0332	-1.601**
	(0.0250)	(0.0785)	(0.0528)	(0.0986)	(0.0410)	(0.149)	(0.0314)	(0.729)
Log of Population (Destination Country)	0.335***	1.241***	1.154***	-1.727**	-0.202*	-0.163	0.0897	-2.323
	(0.115)	(0.249)	(0.170)	(0.675)	(0.113)	(0.289)	(0.0977)	(2.310)
Government Stability (Index)	-0.00546	-0.0218*	-0.00595	0.0149	-0.00138	-0.0159	0.000301	0.133
	(0.00419)	(0.0126)	(0.00690)	(0.0152)	(0.00391)	(0.0219)	(0.00537)	(0.122)
Socioeconomic Conditions (Index)	0.00742	-0.0115	-0.0345**	-0.0262	-0.0159	-0.0635	0.0178	-0.0126
	(0.00835)	(0.0262)	(0.0157)	(0.0325)	(0.0102)	(0.0529)	(0.0110)	(0.142)
Corruption Level (Index)	0.0455***	0.0424	0.0621***	-0.0458	0.0284**	0.0684	0.0403**	-0.0131
	(0.0110)	(0.0328)	(0.0217)	(0.0457)	(0.0116)	(0.0665)	(0.0164)	(0.309)
Colonial Ties (Binary Indicator)	1.199***	0.979***	1.416***	1.562***	0.378***	0.131*	0.901***	0.0379
	(0.128)	(0.156)	(0.134)	(0.167)	(0.0952)	(0.0764)	(0.103)	(0.599)
Regional Trade Agreement (Binary Indicator)	0.161***	0.115	0.137**	0.126	0.0375	-0.172**	0.184***	0.720**
	(0.0529)	(0.0733)	(0.0575)	(0.0922)	(0.0389)	(0.0742)	(0.0631)	(0.348)
Bilateral Trade Flow (in USD)	0.0787***	-0.0166	0.0191	0.182**	0.0132	-0.0185***	0.101***	0.0910**
	(0.0277)	(0.0104)	(0.0143)	(0.0826)	(0.00979)	(0.00629)	(0.0216)	(0.0370)
Mineral Rents (Percentage of GDP)	0.000935	-0.0104	0.00574	0.00276	-0.00180	0.0178	0.00606	0.188**
	(0.00274)	(0.00959)	(0.00473)	(0.00819)	(0.00247)	(0.0190)	(0.00414)	(0.0844)
Observations	14829	5803	12203	2906	5710	930	11415	1215
R-squared	0.565	0.480	0.579	0.462	0.471	0.290	0.462	0.588
Donor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recipient FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pair FE	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Clustered standard errors at the bilateral pair level
Fixed effects: Donor, Recipient, Year.
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

The empirical analysis reveals (Table 12) that geopolitical distance has a statistically significant and negative impact on certain types of ODA. In particular, an increase in geopolitical distance is associated with a notable decrease in ODA flows through global channels and those of non-governmental organizations (NGOs) and civil society. For example, greater geopolitical distance leads to a significant reduction in total aid and aid via NGOs and civil society. These results suggest that donor countries prefer geopolitically closer countries, allowing them to exert increased political and economic influence. This finding is consistent with previous work such as that of , which highlight the importance of geopolitical considerations in the allocation of ODA.

In contrast, geopolitical distance does not have a significant effect on other types of aid, such as aid channeled through multilateral organizations, public-private partnerships, or sectoral channels. This could indicate that aid decisions through these channels are more motivated by multilateral or global development objectives and less by specific bilateral geopolitical interests.

Some control variables included in the model also show significant effects on ODA allocation. For instance, the logarithm of GDP per capita has a significant negative effect on total ODA and several specific channels, including multilateral organizations and sectoral institutions. An increase in GDP per capita is associated with a reduction in aid flows via multilateral organizations, suggesting that donors tend to prioritize low-income countries for ODA, in line with poverty reduction objectives.

The logarithm of the recipient country's population is positively associated with total ODA and aid via multilateral organizations but shows a negative effect on ODA through unreported channels. This suggests that more populous countries generally receive more ODA, but this aid may be distributed less transparently or through less clearly defined channels.

Socioeconomic conditions show a significant negative effect on aid via NGOs and civil society. This result could indicate that adverse socioeconomic conditions, such as high poverty or unemployment, limit the effectiveness of organizations in deploying aid projects, thereby reducing donors' incentives to provide aid through these channels. (Dreher et al., 2013) have shown that poor economic conditions can affect the capacity of NGOs to operate effectively in recipient countries.

Corruption is positively associated with total ODA and other types of aid, including aid via public-private. This counterintuitive result might be explained by the fact that donors attempt to offset the risks of corruption with higher levels of aid or use ODA to encourage institutional reforms. (Knack, 2001) argues that aid may be directed to more corrupt countries in the hope of stimulating reforms and improving governance.

The existence of a regional free trade agreement is positively associated with total ODA and aid via sectoral institutions. Regional trade agreements facilitate economic cooperation and may prompt donors to provide more ODA to support economic development in partner countries. (Baier & Bergstrand, 2007) demonstrated

that free trade agreements can enhance economic integration and cooperation between partner countries, which could explain the increase in ODA flows in response to these agreements.

The results also show that colonial ties have a significant and positive impact on ODA flows, highlighting the importance of historical dynamics in aid relationships. For example, the high and significant coefficients of colonial ties for total ODA and for aid via NGOs and civil society suggest that former colonies continue to receive higher amounts of aid from their former colonizers. This persistence of colonial relationships may be attributed to strategic reasons, where aid is used to maintain influence in former colonies, as highlighted by (Berthélemy, 2006; Weiler et al., 2018), who discuss the persistent influence of colonial relationships in development policies.

This dynamic may also reflect an attempt by former colonizers to correct or compensate for historical imbalances, thereby strengthening political and economic ties. (Alesina & Dollar, 2000) note that donors are often more inclined to invest in countries where they have a better understanding of the sociopolitical contexts, which is often the case with former colonies.

These results underline the importance of considering a wide range of economic, institutional, and historical factors in ODA analysis. They also confirm that ODA is a complex instrument, influenced by geopolitical, economic, and historical considerations that vary depending on the distribution channels and the specific contexts of recipient countries.

3.6.2 Addressing Endogeneity: Instrumental Variable Approach and One-Period Lagged Geopolitical Distance

Table 13 : Results of the regressions of the one-period lagged geopolitical distance on the different aid channels

	(Log of Total Aid Across All Channels)	(Log of Aid via Multilateral Organizations)	(Log of Aid via NGOs and Civil Society)	(Log of Aid via Unreported Channels)	(Log of Aid via Other Channels)	(Log of Aid via Public-Private Partnerships)	(Log of Aid via Public Sector Channels)	(Log of Aid via Sector Institutions)
L.Geopolitical distance	-0.0589**	0.0316	-0.103***	-0.0385	-0.0483	-0.0657	-0.0650**	0.0875
	(0.0230)	(0.0592)	(0.0399)	(0.103)	(0.0298)	(0.0815)	(0.0263)	(0.385)
Log of GDP per Capita (Destination Country)	-0.102***	-0.281***	0.0367	-0.00162	-0.0372	0.308**	-0.0582*	-1.551**
	(0.0271)	(0.0827)	(0.0531)	(0.144)	(0.0437)	(0.147)	(0.0313)	(0.722)
Log of Population (Destination Country)	0.308**	1.259***	1.155***	-2.548***	-0.222*	-0.119	0.0524	-2.329
	(0.123)	(0.253)	(0.175)	(0.881)	(0.114)	(0.296)	(0.100)	(2.302)
Government Stability (Index)	-0.00329	-0.0176	-0.00469	0.0301	-0.000273	-0.0132	0.00204	0.127
	(0.00434)	(0.0127)	(0.00674)	(0.0206)	(0.00395)	(0.0223)	(0.00544)	(0.124)
Socioeconomic Conditions (Index)	0.0111	-0.00613	-0.0301**	-0.0502	-0.0186*	-0.0809	0.0186*	-0.0155
	(0.00883)	(0.0270)	(0.0152)	(0.0483)	(0.0104)	(0.0554)	(0.0112)	(0.143)
Corruption Level (Index)	0.0458***	0.0341	0.0543**	-0.128	0.0209*	0.0354	0.0358**	-0.0229
	(0.0123)	(0.0340)	(0.0223)	(0.0814)	(0.0122)	(0.0665)	(0.0165)	(0.309)
Colonial Ties (Binary Indicator)	1.193***	1.003***	1.427***	1.632***	0.375***	0.132*	0.895***	0.0406
	(0.128)	(0.153)	(0.136)	(0.160)	(0.0948)	(0.0773)	(0.105)	(0.600)
Regional Trade Agreement (Binary Indicator)	0.170***	0.114	0.137**	0.125	0.0379	-0.187**	0.187***	0.712**
	(0.0549)	(0.0739)	(0.0593)	(0.0949)	(0.0391)	(0.0762)	(0.0646)	(0.348)
Bilateral Trade Flow (in USD)	0.0749***	-0.0164	0.0202	0.177**	0.0142	-0.0186***	0.0986***	0.0918**
	(0.0262)	(0.0106)	(0.0145)	(0.0842)	(0.00992)	(0.00607)	(0.0220)	(0.0371)
Mineral Rents (Percentage of GDP)	0.00103	-0.0103	0.00675	-0.000139	-0.00176	0.0179	0.00668	0.188**
	(0.00296)	(0.00987)	(0.00483)	(0.0116)	(0.00268)	(0.0194)	(0.00410)	(0.0847)
Observations	13487	5580	11617	1909	5454	907	10855	1215
R-squared	0.570	0.481	0.587	0.483	0.460	0.282	0.466	0.588
Donor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recipient FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Clustered standard errors at the bilateral pair level
Fixed effects: Donor, Recipient, Year.
$^{*} p < 0.1$, $^{**} p < 0.05$, $^{***} p < 0.01$

Table 14 : Results of the Instrumental Variable Approach

	(Log of Total Aid Across All Channels)	(Log of Aid via Multilateral Organizations)	(Log of Aid via NGOs and Civil Society)	(Log of Aid via Unreported Channels)	(Log of Aid via Other Channels)	(Log of Aid via Public-Private Partnerships)	(Log of Aid via Public Sector Channels)	(Log of Aid via Public Sector Channels)
Geopolitical distance	-1.3342***	-3.0894**	-2.0690***	-2.0690***	-1.4026	-3.4588	-0.5419	-1.1001
	(0.4879)	(1.2918)	(0.7054)	(0.7054)	(1.2832)	(10.4967)	(0.3930)	(18.9914)
Log of GDP per Capita (Destination Country)	0.0247	0.3452	0.3482***	0.3482***	0.1801	1.0483	0.0618	-2.0928
	(0.0490)	(0.2641)	(0.1305)	(0.1305)	(0.2126)	(2.2005)	(0.0747)	(3.7142)
Log of Population (Destination Country)	0.2267	2.0533***	1.2635***	1.2635***	-0.0467	-0.3809	0.1533	-3.5935
	(0.1458)	(0.4101)	(0.2007)	(0.2007)	(0.1970)	(0.8811)	(0.1149)	(6.1017)
Government Stability (Index)	0.0134	0.0012	0.0110	0.0110	0.0083	-0.0345	0.0034	0.0785
	(0.0083)	(0.0194)	(0.0104)	(0.0104)	(0.0116)	(0.0697)	(0.0055)	(0.8456)
Socioeconomic Conditions (Index)	0.0411**	0.0082	0.0014	0.0014	0.0084	0.0245	0.0176	-0.0418
	(0.0186)	(0.0374)	(0.0251)	(0.0251)	(0.0330)	(0.2156)	(0.0133)	(0.1837)
Corruption Level (Index)	-0.0200	-0.1779	-0.0950	-0.0950	-0.0739	-0.2882	0.0058	-0.7233
	(0.0289)	(0.1095)	(0.0644)	(0.0644)	(0.0982)	(1.1760)	(0.0316)	(0.7116)
Colonial Ties (Binary Indicator)	1.2022***	1.0381***	1.4192***	1.4192***	0.4064***	0.0454	0.9072***	0.6635
	(0.1289)	(0.1669)	(0.1379)	(0.1379)	(0.1040)	(0.2120)	(0.1049)	(0.7422)
Regional Trade Agreement (Binary Indicator)	0.1415***	0.1382	0.1133*	0.1133*	0.0224	-0.1947	0.1664***	0.8480**
	(0.0535)	(0.0863)	(0.0641)	(0.0641)	(0.0445)	(0.1619)	(0.0625)	(0.4024)
Bilateral Trade Flow (in USD)	0.0811***	-0.0275**	0.0223	0.0223	0.0136	-0.0294	0.1050***	0.1175*
	(0.0286)	(0.0120)	(0.0147)	(0.0147)	(0.0098)	(0.0349)	(0.0223)	(0.0627)
Mineral Rents (Percentage of GDP)	0.0003	0.0195	0.0120*	0.0120*	0.0062	0.0975	0.0082*	0.2649
	(0.0031)	(0.0183)	(0.0065)	(0.0065)	(0.0095)	(0.1900)	(0.0044)	(0.6461)
Observations	13845	5389	11359	11359	5464	857	10664	896
R-squared	-0.1165	-0.6129	-0.1728	-0.1728	-0.6835	-1.9674	0.0671	0.0206
Donor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recipient FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Clustered standard errors at the bilateral pair level
Fixed effects: Donor, Recipient, Year.
$^{*} p < 0.1$, $^{**} p < 0.05$, $^{***} p < 0.01$

The analysis of the results accounting for endogeneity reveals significant effects of geopolitical distance on ODA flows through various channels, using two distinct methodological approaches, which confirm the complexity of the dynamics at play.

In the approach using the one-period lagged geopolitical distance (Table 13), geopolitical distance shows a negative and significant effect on the total aid distributed through all channels, as well as specifically via NGOs and civil society, and public sector channels. For example, an increase in geopolitical distance leads to a significant reduction in total aid flows, as well as a notable decrease in aid channeled through NGOs. These results corroborate the findings of (Dreher et al., 2017), who emphasize the importance of geopolitical relationships in aid allocation, with donors tending to favor countries with which they have closer ties. Public sector channels also show sensitivity to geopolitical distance, underscoring the importance of stable intergovernmental relations for these aid flows. However, the lack of a significant effect on other aid channels, such as public-private partnerships, might indicate that these channels are driven by other considerations, less directly influenced by geopolitical tensions.

Control variables, such as GDP per capita and the recipient country's population size, also show significant effects. GDP per capita is negatively associated with total aid flows and aid via multilateral organizations, suggesting that donors concentrate their aid on lower-income countries, likely due to greater needs in these regions. This finding aligns with donors' poverty reduction objectives, as discussed by (Burnside & Dollar, 2000), who demonstrated that ODA is often directed toward the poorest countries. The recipient country's population has a positive impact on total aid and some forms of aid, perhaps reflecting a proportional response to demographic needs.

Using the instrumental variable approach (Table 14), based on the difference in political systems between countries in the bilateral pair, the results show an even more pronounced impact of geopolitical distance on aid flows. The negative coefficient associated with geopolitical distance is stronger, suggesting that deteriorating geopolitical relations significantly reduce total aid. This approach reveals stronger relationships, particularly in cases where political and institutional differences are marked, as supported by (Acemoglu & Robinson, 2013) in their analysis of institutional and political dynamics on international cooperation. The role of governance in influencing aid is also highlighted by authors like (Easterly & Levine, 2003), who discuss the impact of political regimes on international relations and aid allocation.

The results from the instrumental method also reinforce the idea that geopolitical distance negatively affects aid through multilateral organizations and NGOs, confirming that these channels are particularly sensitive to geopolitical tensions. Control variables continue to show similar trends to those observed with the lagged variable method, particularly GDP per capita and population, but with varying intensity, suggesting that these factors play a key role in ODA allocation depending on the specific geopolitical context.

The combined analysis of the two approaches to address endogeneity shows that geopolitical distance has a significant and complex impact on ODA flows, with this impact varying depending on the aid channel. The instrumental variables reveal stronger relationships, particularly in contexts where political and institutional differences are marked, while control variables play a crucial role in explaining ODA flows. These results confirm that ODA is a complex instrument, influenced by a combination of geopolitical, economic, and institutional considerations, which vary according to the distribution channels and specific contexts of recipient countries.

3.7   Heterogeneity

3.7.1   Temporal Analysis: 2002-2008 and 2009-2021

Table 15 : Regression Results for 2002-2008 - Geopolitical Distance

	(Log of Total Aid Across All Channels)	(Log of Aid via Multilateral Organizations)	(Log of Aid via NGOs and Civil Society)	(Log of Aid via Unreported Channels)	(Log of Aid via Other Channels)	(Log of Aid via Public-Private Partnerships)	(Log of Aid via Public Sector Channels)	(Log of Aid via Sector Institutions)
Geopolitical distance	-0.728	-2.492	-3.083**	-6.838	2.307	7.226	-0.617	-
	(0.665)	(2.220)	(1.198)	(9.343)	(1.901)	(54.832)	(1.060)	
Observations	4089	1221	2810	2681	1217	106	2364	-

Table 16 : Regression Results for 2009-2021 - Geopolitical Distance

Geopolitical distance	-1.239***	-2.618**	-3.627***	-1.231	-0.107	6.535	-0.495	-1.100
	(0.450)	(1.125)	(1.131)	(1.362)	(0.511)	(29.062)	(0.643)	(18.991)
Observations	9755	4167	8549	202	4247	737	8299	896
Donor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recipient FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Clustered standard errors at the bilateral pair level
Fixed effects: Donor, Recipient, Year.
$^{*}\, p < 0.1$, $^{**}\, p < 0.05$, $^{***}\, p < 0.01$

Period 2002-2008: Post-9/11 and Pre-Financial Crisis

The period from 2002 to 2008 is undeniably marked by the geopolitical repercussions of the September 11, 2001 attacks and the global response to the terrorist threat. The United States, leading the fight against terrorism, engaged in military interventions in Afghanistan and Iraq, which profoundly redefined the

geopolitical and strategic priorities of major powers (Buzan, 2006). In this context, ODA was not only a tool to address humanitarian needs but potentially also a strategic lever to strengthen global security.

The results from this period (Table 15) show that geopolitical distance, measured by the alignment of UN votes between donors and recipients, had a significant impact, particularly on aid channeled through NGOs and civil society. This suggests that donors used ODA to promote strategic objectives in sensitive regions, especially when political alignment with recipients was perceived as crucial for regional stability (Fleck & Kilby, 2010). In contrast, multilateral channels and public-private partnerships do not show significance, which could indicate a more neutral or technical approach in these areas, focused on reconstruction rather than foreign policy objectives (Alesina & Dollar, 2000).

The absence of coefficients for aid via sector institutions, due to insufficient observations, is likely explained by a lower volume of aid flowing through this channel during the period. The insufficient data suggests that this type of aid may have been less frequently used, or underreported, limiting the regression analysis. This could reflect a strategic choice by donors to prioritize other channels, such as NGOs and civil society, which were seen as more effective or relevant for achieving security and stability goals in the post-9/11 geopolitical environment.

Period 2009-2021: Global Financial Crisis, Arab Spring, and COVID-19 Pandemic

The period 2009-2021 presents complex geopolitical challenges and dynamics, including the 2008 global financial crisis, the Arab Spring revolutions, and the COVID-19 pandemic. Each crisis successively reconfigured donor priorities in terms of ODA, often in response to the economic and political imperatives of the moment (Bellin, 2012; Mavrotas, 2010).

The results show an intensification of the impact of geopolitical distance on ODA flows during this period (Table 16). The significance of the coefficients for several channels, including total aid, aid via NGOs and civil society, and multilateral organizations, suggests that geopolitical alignment became an even more determining factor in aid distribution. This can be attributed to the upheavals of the Arab Spring and the need for donors to support favorable regimes or stabilize strategically vital regions in the Middle East and North Africa (Carapico, 2013).

Towards the end of the period, the COVID-19 pandemic highlighted global geopolitical tensions, notably through "vaccine diplomacy," where ODA was used by major powers as a tool of influence projection (S. R. Choudhury et al., 2024; Turhan, 2024). This context redefined global ODA priorities, with a massive reallocation of resources towards public health sectors and economic stabilization, while reflecting the new power dynamics between traditional and emerging donors, such as China.

Comparing the two periods reveals a significant evolution in the use of ODA as a foreign policy instrument. In the years following the 9/11 attacks, ODA appears to have been used more selectively to strengthen geopolitical alliances and support aligned regimes. However, from 2009 onwards, geopolitical influence on ODA became more systematic and significant, particularly in response to the economic and political crises that marked the decade. This intensification could reflect an adaptation of donor strategies, aiming to maximize the impact of their ODA by taking greater account of global geopolitical dynamics and adjusting their actions to emerging economic and health realities.

In summary, the analysis shows that geopolitical distance plays a crucial role in the allocation of ODA, with influence varying according to periods and specific contexts. The results for the 2009-2021 period highlight a stronger and more generalized relationship between geopolitical interests and ODA flows, suggesting that donors increasingly used aid as a strategic tool to manage crises and political transitions in a rapidly changing world.

3.7.2   Regional Analysis

Table 17: Regression Results for Africa - Geopolitical Distance

	(Log of Total Aid Across All Channels)	(Log of Aid via NGOs and Civil Society)	(Log of Aid via Public Sector Channels)
L.Geopolitical distance	-0.076	-0.098*	-0.081
	(0.065)	(0.053)	(0.091)
Observations	5665	4949	4392
Donor FE	Yes	Yes	Yes
Recipient FE	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes

Clustered standard errors at the bilateral pair level
Fixed effects: Donor, Recipient, Year.
$^*p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

Table 18 : Regression Results for Asia - Geopolitical Distance

	(Log of Total Aid Across All Channels)	(Log of Aid via NGOs and Civil Society)	(Log of Aid via Public Sector Channels)
L.Geopolitical distance	-0.344***	-0.196*	-0.334***
	(0.110)	(0.102)	(0.120)
Observations	2803	2285	2174
Donor FE	Yes	Yes	Yes
Recipient FE	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes

Clustered standard errors at the bilateral pair level
Fixed effects: Donor, Recipient, Year.
$^*p < 0.1$, $^{**}p < 0.05$, $^{***}p < 0.01$

Table 19 : Regression Results for Europe - Geopolitical Distance

	(Log of Total Aid Across All Channels)	(Log of Aid via NGOs and Civil Society)	(Log of Aid via Public Sector Channels)
L.Geopolitical distance	0.174	0.257	-0.007
	(0.311)	(0.166)	(0.234)
Observations	840	922	1024
Donor FE	Yes	Yes	Yes
Recipient FE	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes

Clustered standard errors at the bilateral pair level
Fixed effects: Donor, Recipient, Year.
$^{*} p < 0.1, ^{**} p < 0.05, ^{***} p < 0.01$

Table 20 : Regression Results for Latin america - Geopolitical Distance

	(Log of Total Aid Across All Channels)	(Log of Aid via NGOs and Civil Society)	(Log of Aid via Public Sector Channels)
L.Geopolitical distance	-0.325***	-0.146***	-0.256***
	(0.085)	(0.056)	(0.089)
Observations	3868	3240	3016
Donor FE	Yes	Yes	Yes
Recipient FE	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes

Clustered standard errors at the bilateral pair level
Fixed effects: Donor, Recipient, Year.
$^{*} p < 0.1, ^{**} p < 0.05, ^{***} p < 0.01$

Table 21 : Regression Results for Oceania - Geopolitical Distance

	(Log of Total Aid Across All Channels)	(Log of Aid via NGOs and Civil Society)	(Log of Aid via Public Sector Channels)
L.Geopolitical distance	-1.117	0.790	-1.820
	(0.774)	(1.820)	(1.295)
Observations	22	14	14
Donor FE	Yes	Yes	Yes
Recipient FE	Yes	Yes	Yes
Pair FE	Yes	Yes	Yes
Time FE	Yes	Yes	Yes

Clustered standard errors at the bilateral pair level
Fixed effects: Donor, Recipient, Year. * p < 0.1, ** p < 0.05, *** p < 0.01

To delve deeper into the influence of geopolitical distance on ODA, a series of regressions were conducted across different geographic regions. This approach helps capture regional variations in the relationship between donors and recipient countries, focusing on aid channels that previously showed significant impacts. The regions under consideration are Africa, Asia, Europe, Latin America, and Oceania. The regression results are displayed in the tables above.

Africa

In Africa, geopolitical distance exhibits a negative effect on aid through **NGOs and civil society**, while it does not have a significant effect on total aid or aid via public sector channels. This suggests that donors are more likely to reduce support for NGOs and civil society in geopolitically distant countries, possibly due to operational challenges or reduced political influence. However, the lack of significance for total aid indicates that other factors may offset the impact of geopolitical distance in overall aid allocation in Africa.

Asia

The results for Asia show a significant and negative impact of geopolitical distance on all the aid channels considered. The coefficient of **total aid** suggests that an increase in geopolitical distance is associated with a substantial decrease in aid flows. Similarly, aid through **NGOs and civil** and **public sector channels** are also negatively affected. These results may reflect the complex geopolitical dynamics in Asia, where donors might prioritize strategically important or geopolitically close countries to strengthen their influence in the region (Alesina and Dollar, 2000).

Latin America

In Latin America, geopolitical distance also has a significant negative impact on total aid as well as on the two specific channels examined: **NGOs and civil society** and **public sector channels**. These findings suggest that geopolitical considerations play a strong role in aid allocation decisions in this region. Donors may be motivated by strategic interests, such as strengthening political alliances or promoting favorable economic models (Dreher & Fuchs, 2015).

Europe

In contrast to other regions, Europe does not show a significant effect of geopolitical distance on aid flows through any of the channels considered. The coefficients are not statistically significant, which could be explained by Europe's unique context, where countries are geographically close and often share strong political and economic ties, particularly within the European Union. Regional integration and common policies may mitigate the impact of geopolitical distance in this region.

Oceania

The results for Oceania should be interpreted with caution due to the small number of observations (n=22 for total aid). The high but statistically insignificant coefficients suggest a potentially strong relationship

between geopolitical distance and aid flows, but the lack of significance prevents firm conclusions. Further research with a larger sample would be needed to clarify this relationship.

The regional analyses highlight heterogeneity in the impact of geopolitical distance on aid flows. In Asia and Latin America, geopolitical distance is an important and negative determinant of aid, indicating that donors are more likely to invest in geopolitically close countries, possibly for strategic or economic reasons. In Africa, this effect is limited to aid channels involving NGOs and civil society, suggesting that geopolitical proximity may facilitate collaboration with non-state actors.

The lack of significant effects in Europe underscores that other factors, such as regional policies and multilateral agreements, may play a more decisive role in aid allocation. This is consistent with the work of (Brech & Potrafke, 2014), who highlight the importance of regional institutions in the distribution of ODA.

3.8   Conclusion

The analysis in this study, based on disaggregated data, reveals complex dynamics between geopolitical distance and ODA provided by member countries of the OECD's Development Assistance Committee. The use of disaggregated data, which allows for the exploration of **specific ODA transmission channels**, has been essential in highlighting how ODA is increasingly being used as a foreign policy tool, particularly **through certain channels**, such as **NGOs and civil society**, **multilateral organizations**, and **public sector channels**. These channels serve as strategic levers, strongly influenced by the geopolitical interests of donors, demonstrating that aid distribution often responds to political imperatives rather than solely to development goals.

The **regional analysis** further illuminates the heterogeneous effects of geopolitical distance on ODA allocation. In **Asia** and **Latin America**, the negative impact of geopolitical distance is pronounced across various aid channels, indicating that geopolitical alignment plays a decisive role in aid distribution in these regions. This suggests that donor countries prioritize closer political and strategic allies, potentially using aid to reinforce regional influence or support political stability. In **Africa**, the effect of geopolitical distance is significant primarily in aid channeled through NGOs and civil society, possibly reflecting operational challenges or the need for greater local collaboration in geopolitically distant countries. Conversely, **Europe** shows no significant impact of geopolitical distance, likely due to the integration and political coherence within the region, while **Oceania**, with a limited dataset, presents results that remain inconclusive.

However, certain limitations must be acknowledged. Although the use of instrumental variables partially addresses the endogeneity problem, there remains a risk of bias in the estimates due to the complexity of

international relations and unobserved factors. Additionally, the measurement of geopolitical distance, while advanced, remains an approximation of the actual political relationships between states and may not capture the full subtlety of diplomatic interactions, particularly in regions where geopolitical dynamics are rapidly evolving.

DAC countries, bound by international commitments to sustainable development and poverty reduction, should consider diversifying aid channels to better meet the specific needs of recipient countries while minimizing geopolitical influences. The regional variations observed suggest that a one-size-fits-all approach is insufficient, and that aid policies should be tailored to the geopolitical realities of each region. Greater transparency in the use of ODA by **NGOs** and **civil society** could improve the effectiveness of aid, particularly in regions where these channels are most affected by geopolitical considerations. Furthermore, **multilateral institutions**, often perceived as less biased by national interests, should play a more central role in the distribution of ODA to ensure that aid is fair, focused on sustainable development, and less subject to strategic manipulation.

It is crucial that DAC donors implement robust **monitoring and evaluation mechanisms** to track the impact of ODA, particularly in geopolitically sensitive regions such as Asia and Latin America, where geopolitical distance has the most significant effect. This will ensure that aid achieves its development objectives while minimizing the influence of political interests. Future research could focus on more detailed analyses at the regional or sectoral level to better understand how geopolitical distance influences ODA in specific contexts. A comparison between DAC donors and other emerging actors, like **China**, could provide insights into different geopolitical strategies in ODA. Moreover, studying the impact of recent global crises, such as the **COVID-19 pandemic**, on the reorientation of ODA priorities would be essential to understand how global shocks affect aid dynamics and geopolitical influence.

In summary, this study underscores the importance of considering the geopolitical dimension in the analysis of ODA provided by DAC countries, while highlighting the need for more transparent, regionally tailored, and equitable aid policies that respond to the needs of populations in an increasingly complex international context.

Appendix B

Figure 12: Impact of Explanatory Variables on Aid Channels

Appendix B
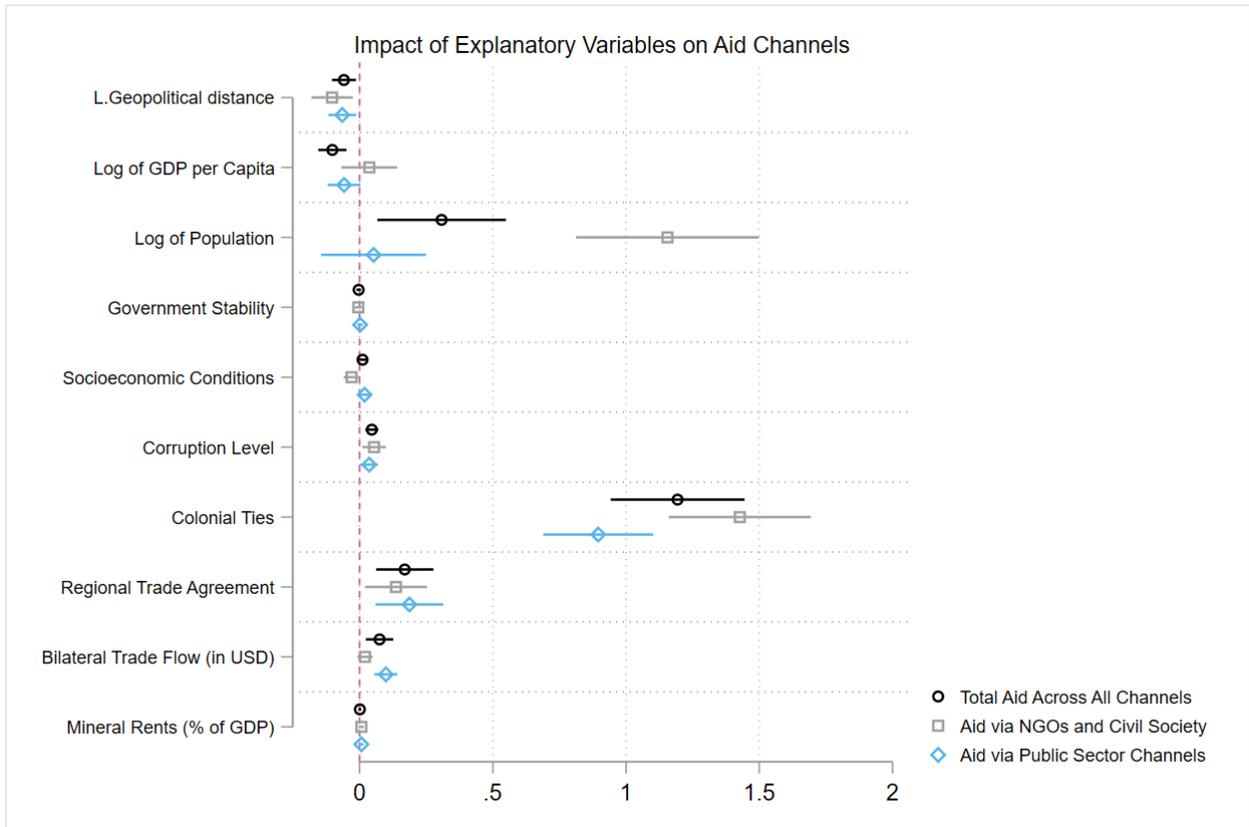
Figure 13 : Relationship between Aid and Geopolitical distance for Different Channels
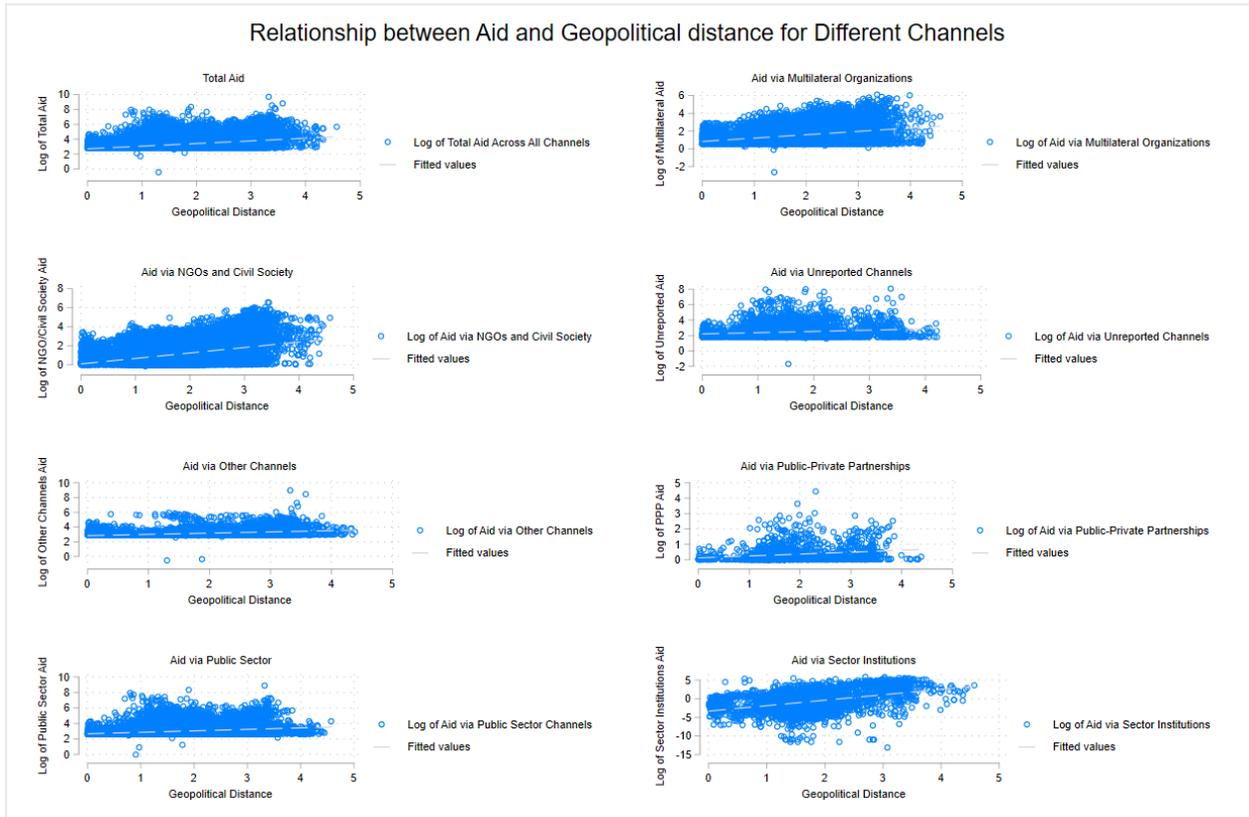
Appendix B

Figure 14 : Distribution of Aid by Region across Different Channels


Distribution of Aid by Region across Different Channels
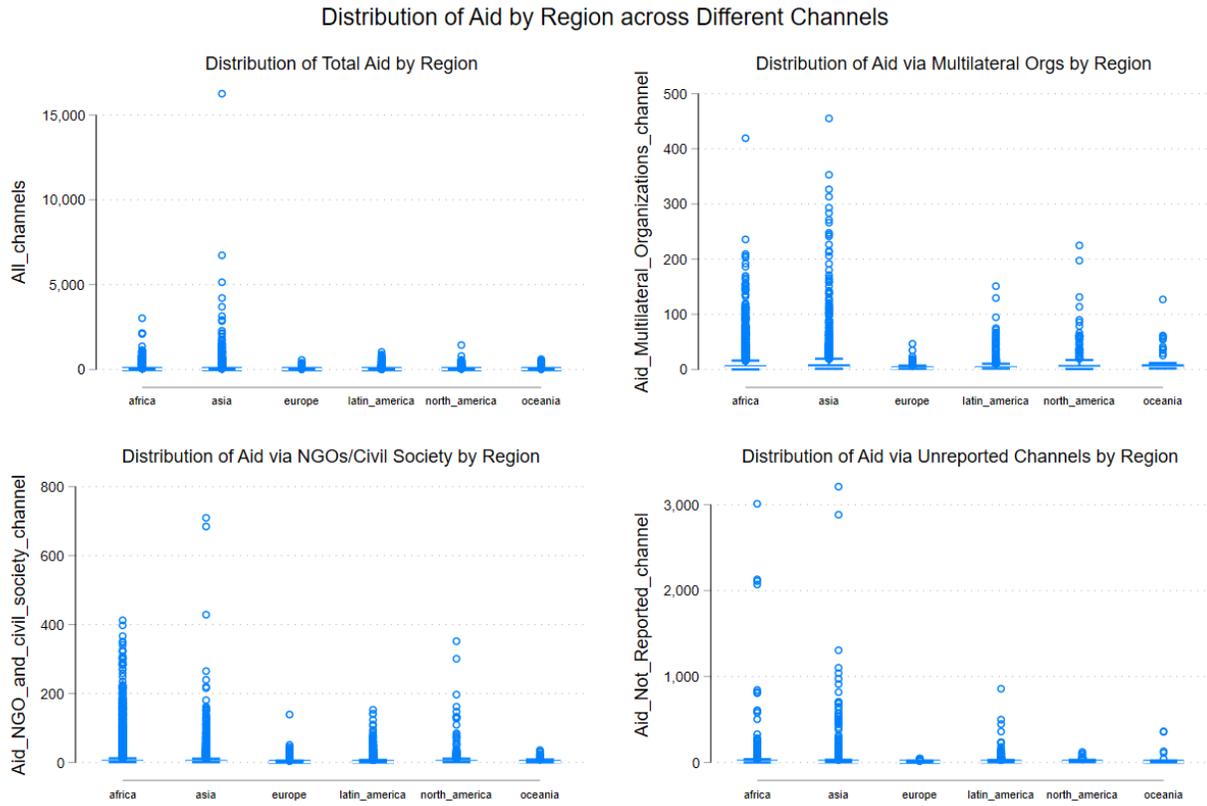
## Distribution of Aid by Region across Different Channels
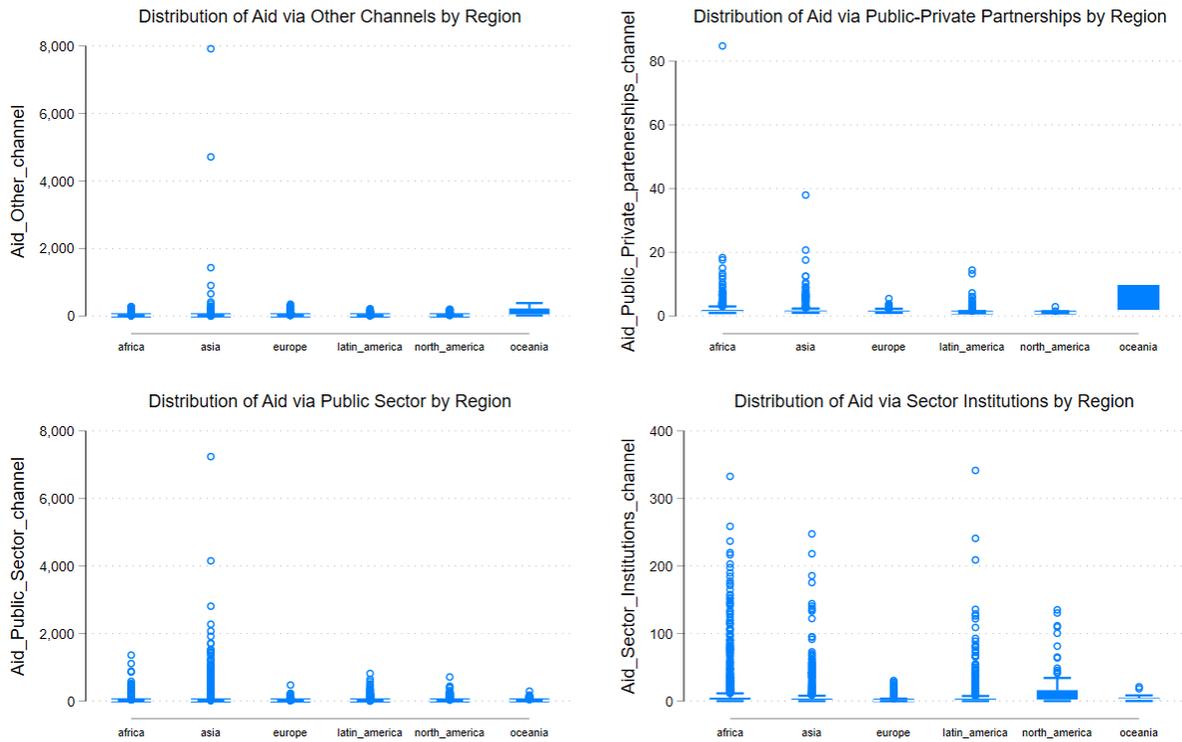
Figure 15 : Trend of Yearly Proportions of Aid Distribution by Channel as a Share of Total Aid (2002-2021)
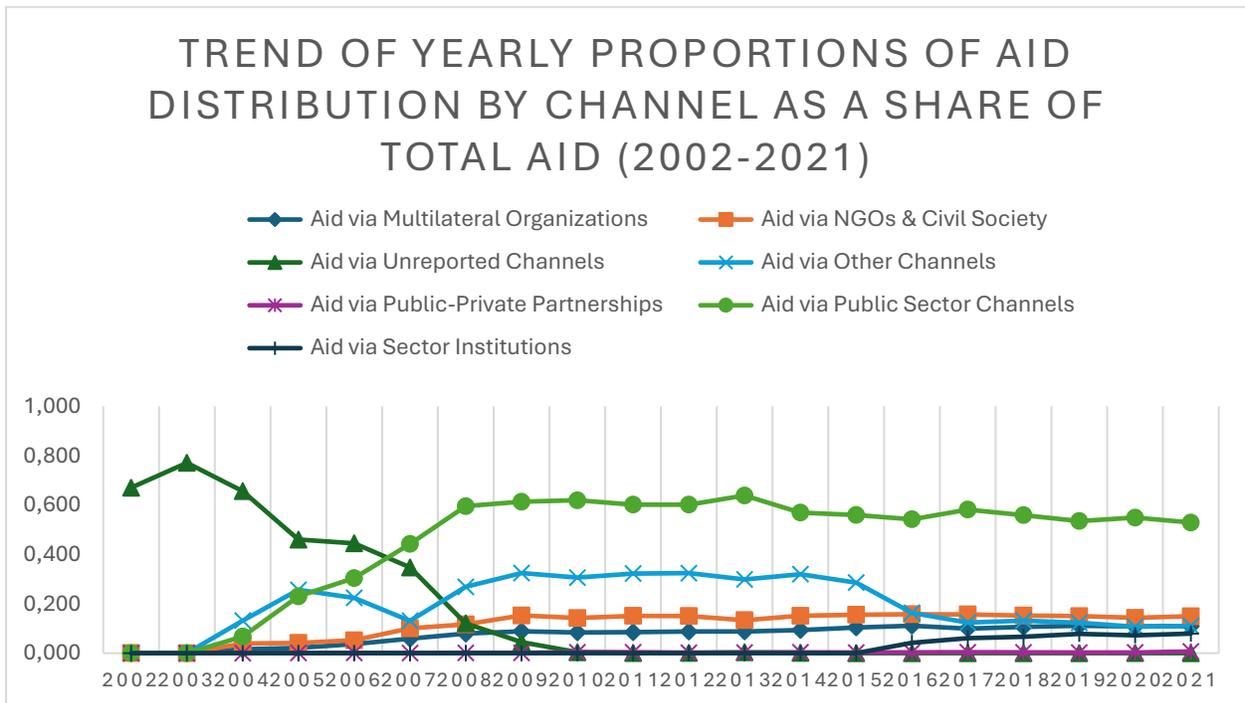
Appendix B

Table 22 : Summary statistics by Partner's region
Africa

	Mean	SD	Min	Max
Geopolitical distance	1.661	.525	0.005	4.572
Total Aid Across All Channels (millions USD)	25.233	88.652	-8.151	3004.798
Aid via Multilateral Organizations (millions USD)	7.206	18.318	-1.629	417.492
Aid via NGOs & Civil Society (millions USD)	7.352	25.492	-0.022	411.444
Aid via Unreported Channels (millions USD)	20.965	120.411	-5.815	3004.798
Aid via Other Channels (millions USD)	5.949	21.473	-5.818	260.981
Aid via Public-Private Partnerships (millions USD)	1.002	3.724	-0.051	83.781
Aid via Public Sector Channels (millions USD)	16.304	48.198	-10.558	1346.796
Aid via Sector Institutions (millions USD)	11.841	32.847	0.000	332.639
GDP per Capita (constant USD)	1.581	1.983	0.108	11.792
Population (in millions)	20267.629	29851.734	1285.318	211400.71
Government Stability (index)	7.934	1.42	4.458	11
Socioeconomic Conditions (index)	3.281	1.188	0.500	6.458
Corruption Level (index)	2.021	.677	0.000	4
Colonial Ties (binary)	.039	.195	0.000	1
Regional Trade Agreement (binary	.059	.235	0.000	1
Bilateral Trade Flow (thousands	.013	.047	0.000	1.152
Mineral Rents (% of GDP)	1.595	3.451	0.000	28.249
Asia				
Geopolitical distance	1.778	.548	0.013	4.207
Total Aid Across All Channels (millions USD)	39.756	278.772	-16.353	16240.93
Aid via Multilateral Organizations (millions USD)	9.608	27.148	-0.420	453.379
Aid via NGOs & Civil Society (millions USD)	6.139	22.148	-0.166	708.595
Aid via Unreported Channels (millions USD)	34.769	173.23	-0.674	3203.576
Aid via Other Channels (millions USD)	13.378	202.057	-18.419	7896.903
Aid via Public-Private Partnerships (millions USD)	.991	2.961	0.001	36.984
Aid via Public Sector Channels (millions USD)	26.639	178.302	-5.273	7225.164
Aid via Sector Institutions (millions USD)	8.211	23.645	0.000	247.491
GDP per Capita (constant USD)	4.636	5.515	0.138	25.962
Population (in millions)	88782.053	266456.48	2308.409	1393409.1
Government Stability (index)	7.964	1.41	5.083	11.083
Socioeconomic Conditions (index)	4.993	1.91	0.500	10
Corruption Level (index)	2.088	.606	1.000	3.5
Colonial Ties (binary)	.017	.128	0.000	1
Regional Trade Agreement (binary	.112	.316	0.000	1
Bilateral Trade Flow (thousands	.068	.261	0.000	4.851
Mineral Rents (% of GDP)	1.817	3.424	0.000	26.573
Europe				
Geopolitical distance	.591	.653	0.000	3.565
Total Aid Across All Channels (millions USD)	10.593	31.874	0.000	541.028
Aid via Multilateral Organizations (millions USD)	1.865	3.246	-0.089	44.683
Aid via NGOs & Civil Society (millions USD)	2.015	5.334	-0.010	138.02
Aid via Unreported Channels (millions USD)	4.776	7.395	0.000	40.564
Aid via Other Channels (millions USD)	9.318	32.994	-0.065	332.199
Aid via Public-Private Partnerships (millions USD)	.405	.678	0.001	4.486
Aid via Public Sector Channels (millions USD)	3.676	16.038	-0.185	460.422
Aid via Sector Institutions (millions USD)	2.255	5.288	0.001	30.349
GDP per Capita (constant USD)	5.299	3.372	0.459	17.399
Population (in millions)	9387.737	13008.063	2065.092	48202.499
Government Stability (index)	7.518	1.293	5.250	11
Socioeconomic Conditions (index)	5.48	1.313	2.500	8.583
Corruption Level (index)	1.966	.467	1.000	3
Colonial Ties (binary)	0	0	0.000	0
Regional Trade Agreement (binary	.432	.495	0.000	1
Bilateral Trade Flow (thousands	.022	.046	0.000	.525
Mineral Rents (% of GDP)	.417	.817	0.000	5.395

Appendix B

Latin america

Geopolitical distance	1.513	.653	0.025	4.446
Total Aid Across All Channels (millions USD)	13.192	48.632	-11.386	1011.591
Aid via Multilateral Organizations (millions USD)	3.64	9.298	-0.119	149.247
Aid via NGOs & Civil Society (millions USD)	3.786	9.7	-0.008	151.832
Aid via Unreported Channels (millions USD)	12.682	44.758	-0.004	851.551
Aid via Other Channels (millions USD)	3.563	14.195	-2.172	195.745
Aid via Public-Private Partnerships (millions USD)	.396	1.275	0.000	13.437
Aid via Public Sector Channels (millions USD)	8.001	33.571	-13.016	803.325
Aid via Sector Institutions (millions USD)	9.646	30.042	0.000	341.493
GDP per Capita (constant USD)	6.697	4.267	0.894	18.704
Population (in millions)	25671.47	44553.763	2615.253	213993.44
Government Stability (index)	7.25	1.251	4.583	10.333
Socioeconomic Conditions (index)	5.152	1.369	1.500	8
Corruption Level (index)	2.299	.796	1.000	4.5
Colonial Ties (binary)	.003	.05	0.000	1
Regional Trade Agreement (binary	.284	.451	0.000	1
Bilateral Trade Flow (thousands	.049	.198	0.000	3.796
Mineral Rents (% of GDP)	1.377	2.767	0.000	16.87

North america

Geopolitical distance	1.25	.467	0.264	3.206
Total Aid Across All Channels (millions USD)	30.289	98.687	0.000	1419.11
Aid via Multilateral Organizations (millions USD)	9.681	25.029	-0.806	223.117
Aid via NGOs & Civil Society (millions USD)	8.026	28.973	-0.003	350.722
Aid via Unreported Channels (millions USD)	12.655	23.76	0.000	114.689
Aid via Other Channels (millions USD)	10.999	32.04	-0.102	183.006
Aid via Public-Private Partnerships (millions USD)	.164	.332	0.000	1.926
Aid via Public Sector Channels (millions USD)	19.369	60.658	0.000	697.507
Aid via Sector Institutions (millions USD)	19.035	36.107	0.000	135.061
GDP per Capita (constant USD)	5.044	4.18	0.314	10.452
Population (in millions)	65966.609	55782.035	8859.635	130262.22
Government Stability (index)	6.941	1.013	5.167	10.292
Socioeconomic Conditions (index)	3.868	3.47	0.000	8.5
Corruption Level (index)	1.533	.456	1.000	2.5
Colonial Ties (binary)	0	0	0.000	0
Regional Trade Agreement (binary	.732	.443	0.000	1
Bilateral Trade Flow (thousands	.949	3.431	0.002	21.401
Mineral Rents (% of GDP)	.251	.321	0.000	1.365

Oceania

Geopolitical distance	1.1	.457	0.222	2.879
Total Aid Across All Channels (millions USD)	37.779	112.68	0.001	584.6
Aid via Multilateral Organizations (millions USD)	9.901	20.96	0.005	125.138
Aid via NGOs & Civil Society (millions USD)	2.975	5.841	-0.001	34.513
Aid via Unreported Channels (millions USD)	25.585	79.07	0.003	355.301
Aid via Other Channels (millions USD)	72.722	114.7	0.001	364.678
Aid via Public-Private Partnerships (millions USD)	3.27	4.759	0.453	8.765
Aid via Public Sector Channels (millions USD)	18.823	41.565	0.001	278.547
Aid via Sector Institutions (millions USD)	4.338	6.147	0.066	21.09
GDP per Capita (constant USD)	1.933	.785	0.530	2.916
Population (in millions)	7564.114	1004.306	5660.267	9119.005
Government Stability (index)	7.252	.87	6.333	9.125
Socioeconomic Conditions (index)	3.494	.11	2.333	4
Corruption Level (index)	1.664	.461	1.000	2
Colonial Ties (binary)	.045	.208	0.000	1
Regional Trade Agreement (binary	.554	.498	0.000	1
Bilateral Trade Flow (thousands	.016	.049	0.000	.287
Mineral Rents (% of GDP)	9.18	5.453	1.806	19.328

Appendix B

Table 23 : Yearly Proportion of Aid by Channel (%) (2002-2021)

Year	Aid via Multilateral Organizations	Aid via NGOs & Civil Society	Aid via Unreported Channels	Aid via Other Channels	Aid via Public-Private Partnerships	Aid via Public Sector Channels	Aid via Sector Institutions
2002	0	0.00	0.67	0	0	0	0
2003	0	0	0.77	0	0	0	0
2004	0.02	0.04	0.66	0.13	0	0.07	0
2005	0.02	0.04	0.46	0.26	0.00	0.23	0
2006	0.04	0.05	0.44	0.22	0.00	0.30	0
2007	0.06	0.10	0.35	0.13	0.00	0.44	0
2008	0.08	0.12	0.12	0.27	0.00	0.60	0
2009	0.09	0.15	0.04	0.32	0.00	0.61	0
2010	0.08	0.14	0.00	0.31	0.00	0.62	0
2011	0.09	0.15	0.00	0.32	0.00	0.60	0
2012	0.09	0.15	0.00	0.32	0.00	0.60	0
2013	0.09	0.13	0.00	0.30	0.00	0.64	0
2014	0.09	0.15	0.00	0.32	0.00	0.57	0
2015	0.10	0.16	0	0.29	0.00	0.56	0
2016	0.11	0.16	0	0.16	0.00	0.54	0.04
2017	0.10	0.16	0	0.12	0.00	0.58	0.06
2018	0.11	0.15	0	0.13	0.00	0.56	0.07
2019	0.11	0.15	0	0.12	0.00	0.53	0.08
2020	0.11	0.14	0.00	0.11	0.00	0.55	0.07
2021	0.11	0.15	0	0.11	0.01	0.53	0.08

Table 24 : Hausman test[13]

	Coefficients			
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	Std. err.
idealpointdistance	-.1580996	-.024439	-.1336606	.0098696
lgdp_d	-19.78428	.2663315	-20.05061	16.57829
lgdpcap_d	19.51997	-.5062067	20.02618	16.57843
AGovStab_Imp	.0026786	-.0033715	.0060502	.0015036
BSocioEco_Imp	-.0167855	-.0248659	.0080804	.0036533
FCorrup_Imp	.0900704	.0895217	.0005487	.0036423
rta	-.0047744	.0161355	-.02091	.0050233
tradeflow_comtrade_d	.0492582	.1723983	-.1231401	.0231905
OilRents_Imp	.0124858	.0106013	.0018845	.0012253
MinRents_Imp	.0099098	.0096534	.0002564	.0008795
b = Consistent under H0 and Ha				
B = Inconsistent under Ha efficient under H0; obtained from xtreg.				
Test of H0: Difference in coefficients not systematic				
chi2(7) = (b-B)'[(V_b-V_B)^(-1)](b-B)				
= 256.12				
Prob > chi2 = 0.0000				

---

[13] The p-value is below 0.001, leading to the rejection of the null hypothesis (H0). This indicates that the fixed-effects (FE) model is preferred over the random-effects (RE) model for these data. The unobserved group-specific effects (country pair effects) are correlated with the explanatory variables, justifying the use of the FE model to ensure unbiased and consistent estimates.

Appendix B

Table 25 : List of countries

DONORS		RECIPIENTS			
Australia		Angola	Ghana	Myanmar	Tanzania
Austria		Albania	Guinea	Mongolia	Uganda
Belgium		Argentina	The Gambia	Mozambique	Ukraine
Canada		Armenia	Guinea-Bissau	Mauritania	Uruguay
Switzerland		Azerbaijan	Guatemala	Malawi	Uzbekistan
Czech Republic		Burundi	Honduras	Namibia	Venezuela
Denmark		Benin	Croatia	Niger	South Africa
Spain		Burkina Faso	Haiti	Nigeria	Zambia
Finland		Bangladesh	India	Nicaragua	Zimbabwe
France		Bosnia and Herzegovina	Iraq	Nepal	
United Kingdom		Belarus	Jamaica	Oman	
Greece		Bolivia	Jordan	Panama	
Hungary		Brazil	Kazakhstan	Peru	
Ireland		Botswana	Kenya	Philippines	
Italy		Central African Republic	Kyrgyzstan	Papua New Guinea	
Japan		Chile	Cambodia	Paraguay	
Lithuania		Côte d'Ivoire	Laos	Rwanda	
Netherlands		Cameroon	Lebanon	Saudi Arabia	
Norway		Republic of the Congo	Liberia	Senegal	
New Zealand		Colombia	Sri Lanka	Sierra Leone	
Poland		Costa Rica	Lesotho	El Salvador	
Portugal		Dominican Republic	Moldova	Chad	
Slovakia		Ecuador	Madagascar	Togo	
Slovenia		Eritrea	Mexico	Thailand	
Sweden		Gabon	North Macedonia	Tajikistan	
United States		Georgia	Mali	Turkmenistan	

Chapter 4: Geopolitical Distance and Chinese Foreign Direct Investment: Strategic Adaptations and Regional Dynamics

4.1 Introduction

Since the economic reforms initiated in 1978, China has emerged as an indispensable player in the global economy, transforming its economic model to become both the world's leading exporter of goods and one of the largest sources of foreign direct investment (FDI). Contrary to traditional assumptions that FDI primarily flows to geopolitically aligned countries (M. S. Aiyar et al., 2023; Blonigen & Piger, 2014), China's strategy reveals a more complex dynamic. China maintains substantial trade and investment relationships not only with its geopolitical allies, such as Russia, but also with Western economies, including the United States, despite ongoing trade tensions. This uniqueness stems less from isolated diplomatic pragmatism and more from China's vast economic weight and its structuring role in global trade, FDI, and international aid flows.

This complexity calls for a critical reassessment of traditional analytical frameworks applied to Chinese FDI. Specifically, it highlights the need to explore how China employs FDI as a strategic lever, integrating economic and geopolitical objectives to reshape international balances. Geopolitical distance is a critical factor in understanding China's foreign direct investment decisions. As illustrated in Figure 29 (Appendix C), the global map of geopolitical distances in 2020 highlights significant disparities in China's political relationships with various countries. By focusing on Chinese FDI stocks rather than annual flows, this study seeks to understand the lasting impact of these investments on host countries' economic structures and global geopolitical dynamics.

In this context, our current study proposes an innovative approach by focusing on Chinese FDI stocks, as opposed to merely analyzing flows. This distinction is crucial because FDI stocks reflect long-term commitments and a better understanding of China's strategy (Wrobel, 2019). Such a perspective is especially relevant as it allows for an evaluation of the lasting impact of Chinese investments on the economic structure of host countries and global geopolitical balances.

For this investigation, we employ a fixed-effects panel regression methodology, complemented by quantile regression. This combined approach is particularly suited to our study as it allows us to examine the effects of Chinese FDI not only in terms of average impact but also at different points along the investment distribution. Quantile regression enables the identification of how specific characteristics of host countries (whether they are allies, neutral, or considered competitors) modulate the intensity and nature of Chinese

investments. Simultaneously, the fixed-effects panel regression will control for time-invariant characteristics of host countries that could influence FDI flows. The study will cover nearly 132 countries partnering with China over the period from 1990 to 2021, providing a broad dataset to better understand how these investments shape economic and geopolitical dynamics worldwide. This level of analysis is essential to disentangle the complex motivations behind China's global investment strategy and to precisely assess the impact of its FDI on international relations.

In addition to the quantile and fixed-effects panel regression methodologies, our study will also include comparative analyses between China and other major geopolitical actors, including Russia, the United States, France, the United Kingdom, and India (Figure 21 to 26). This comparison is crucial for several reasons. First, it will allow us to evaluate the uniqueness of China's investment strategy compared to other influential economic and geopolitical powers. Understanding the similarities and differences in these nations' investment approaches can reveal how underlying geopolitical strategies and economic objectives shape global FDI flows.

Second, comparing these specific countries is strategic because they represent varied models of geopolitical influence and play significantly different roles in the global economy. Russia, with its vast natural resources and strategic approach to its geopolitical neighbors, offers a useful basis of comparison to China, particularly in terms of partnerships within the Eurasian regions. The United States, as both an economic and military superpower and the world's largest economy, provides a key reference point for examining investments in technology and defense. France and the United Kingdom, with their advanced economies and active international investment policies, particularly in Africa and other developing regions, will serve as a comparison to analyze Western influence against China's expansion.

Finally, this comparison will help contextualize China's results within a broader framework, offering a perspective on how the investment policies and strategic orientations of these countries interact with or differ from Chinese practices. This will provide valuable insights into power dynamics and shifting balances in the international system, illuminating debates on globalization, international cooperation, and the competition for economic and political influence.

These comparative analyses will significantly enrich our study, adding depth and relevance to the evaluation of FDI strategies and their global impact, and allowing for a more nuanced understanding of the complex interactions between the global economy and geopolitics.

In summary, this study aims to transcend traditional paradigms to shed light on China's investment strategy in an era marked by geoeconomic competition and the pursuit of strategic influence. Relying on robust data and rigorous methodology, it seeks to contribute significantly to our understanding of how Chinese FDI is reshaping international relations, highlighting China's role in shaping a new world order.

Our results significantly illustrate how geopolitical distance influences the stock of FDI, revealing nuances depending on the type of host country economy. Quantile regressions demonstrate that for smaller investments, political considerations seem less crucial, while larger investments are substantially affected by these same considerations, underscoring China's strategic use of FDI to bolster its geopolitical objectives.

The following sections of this document will delve into a literature review that establishes the theoretical framework and relevant prior studies. This section will be followed by a detailed exploration of the main channels through which geopolitical factors influence FDI, where we will analyze how political factors affect investment decisions. We will then address the methodology and data used for our study, describing the econometric approaches adopted and the nature of the data collected for the analysis. This technical section will precede the presentation of estimation results, where we will discuss the measured impact of geopolitical variables on Chinese FDI across different econometric specifications. Each result will be discussed in detail to illuminate the nuances of the observed relationships. Finally, the conclusion will synthesize the main findings, highlight the implications for theorists and practitioners, and propose directions for future research.

4.2 Background

FDI is deeply influenced by global geopolitical tensions, which not only alter investment strategies but also reshape the economic orientations of nations. In light of recent studies, particularly those by (M. S. Aiyar et al., 2023) it is clear that the rise in trade tensions, especially between major powers like the United States and China, has driven nations to reassess and often redirect their FDI flows toward countries deemed politically stable and aligned with their geopolitical interests. This phenomenon is exacerbated by major events such as Brexit, Sino-American tensions, and other regional conflicts, which underscore the fragility of existing trade agreements and political alliances (Buelens & Tirpák, 2017).

The impact of these tensions is significantly reflected in the redistribution of FDI flows. Historically, FDI was primarily motivated by the pursuit of economic efficiency, such as accessing lower-cost labor markets or raw materials. However, in the current context of "slowbalisation," where economic globalization is slowing down, policymakers and businesses are re-evaluating the risks associated with investing in geopolitically unstable regions. Research shows that FDI is increasingly channeled toward countries that share not only economic ties but also political and security affinities, forming economic blocs that mirror geopolitical alliances ((Colantone & Stanig, 2018; Rodrik, 2018)).

Moreover, the nature of the sectors into which these investments are directed has also evolved. Strategic sectors such as advanced technology, energy, and critical infrastructure are seeing a proportional increase in FDI, as nations seek to secure their supply chains against political disruptions and strengthen their economic autonomy. This trend is illustrated by policies like the "CHIPS Act" in the United States, which aims to revitalize domestic semiconductor production capacity in response to dependence on foreign suppliers, particularly in contexts of geopolitical tensions (Antràs & De Gortari, 2020; Varas et al., 2021).

In conclusion, the influence of geopolitical tensions on FDI is a critical dimension of contemporary economic strategy, reflecting a shift from purely economic motivations toward integrated strategic considerations. This complex dynamic requires ongoing analysis to fully understand its long-term implications for the configuration of international economic relations and global geopolitical stability.

The strategy of "friend-shoring," or refocusing investments toward countries considered politically and economically stable allies, has become a key adaptive response to rising global geopolitical tensions. This concept reflects an evolution in how businesses and governments approach foreign direct investment in response to political and economic uncertainties. In a world marked by increased political volatility, the need for stability and predictability is pushing multinationals to re-evaluate their supply chains. Friend-shoring is promoted as a strategy to minimize risks by prioritizing investments in regions where political relations are not only friendly but also stable. This strategy is particularly relevant in vital sectors such as technology, health, and infrastructure, where investment security is paramount. Recent events—such as the escalating trade tensions between the United States and China and the war in Ukraine—have reinforced the urgency of adopting new approaches to secure global value chains. In this context, legislative initiatives like the CHIPS Act in the United States illustrate a broader strategic shift. This policy not only aims to revitalize domestic semiconductor production but also aligns with the "friend-shoring" strategy advocated by U.S. Treasury Secretary Janet Yellen. In her April 2022 speech, Yellen emphasized the importance of reducing dependency on geopolitical rivals by relocating supply chains to trusted partners. She highlighted that, in an increasingly volatile global environment, countries should seek deeper integration with reliable allies who share common economic values and geopolitical interests, in order to strengthen economic resilience and national security [14] (Luo & Van Assche, 2023).

Friend-shoring significantly influences companies' location decisions by favoring countries with trade policies aligned with those of the parent company. Consequently, this can lead to a polarization of investments that favors stable developed or emerging economies at the expense of less stable but potentially more profitable regions. While recent directives in Europe and the United States, such as efforts to strengthen domestic production capacities for key technologies, primarily focus on reducing dependence on external suppliers,

---

[14] (*Remarks by Secretary of the Treasury Janet L. Yellen at the 2022 "Virtual Davos Agenda" Hosted by the World Economic Forum*, 2024)

they share a complementary objective with friend-shoring: enhancing supply chain resilience. Friend-shoring, however, goes a step further by explicitly prioritizing investment in geopolitically aligned countries, thereby combining economic and strategic considerations. This strategy is not only a defensive measure in response to geopolitical uncertainties but also a proactive lever for navigating the global economic landscape with greater agility. This reactive investment strategy underscores the growing importance of political dimensions in global economic decisions, marking an era where geopolitics and economics are inextricably linked. Each country uses FDI as a strategic tool to strengthen its economic interests and extend its geopolitical influence. For example, the United States and China are often seen as dominant players whose overseas investments are largely perceived as extensions of their foreign policy. The United States, through strategic legislation, seeks to secure its technological supply chains and minimize dependence on potentially hostile foreign actors. Similarly, China, through projects like the Belt and Road Initiative, uses its investments to weave a network of economic and political influence across Asia and beyond.

In Europe, France and the United Kingdom are adopting policies aimed at consolidating economic ties while enhancing competitiveness against global economic giants. France, for example, has pushed for initiatives such as "Made in Europe" to encourage local production and reduce economic dependence on non-EU members[16].

The China we are studying represents a particularly instructive case study in terms of FDI policies due to its distinct economic and geopolitical strategy. China's approach to FDI illustrates a combination of economic ambitions and geopolitical maneuvers aimed at strengthening its global influence and securing strategic advantages on the international stage.

The China we are studying represents a particularly instructive case study in terms of FDI policies due to its distinct economic and geopolitical strategy. China's approach to FDI illustrates a combination of economic ambitions and geopolitical maneuvers aimed at strengthening its global influence and securing strategic advantages on the international stage.

Historically, China's relationship with FDI has evolved substantially over the past four decades. The initial phase began with the implementation of the "Open Door Policy" in the late 1970s, aimed at attracting foreign capital to support economic modernization and industrial development. In the 1990s and early 2000s, China emerged as one of the world's largest recipients of FDI, leveraging low labor costs and its vast domestic market. This phase contributed to rapid economic growth and integration into global production networks. By the early 2000s, China launched the "Go Out" strategy, encouraging Chinese firms to invest abroad,

---

[16] (*Ce "Made in Europe" que propose la France*, 2023)

particularly in strategic sectors such as infrastructure, energy, and technology. This outward orientation was further institutionalized with the Belt and Road Initiative (BRI) in 2013, which positioned FDI as both an economic instrument and a tool of geopolitical influence.

Chinese FDI is characterized by its wide geographic reach and its concentration in strategic sectors such as infrastructure, technology, natural resources, and increasingly, industries linked to the decarbonization of the economy. The BRI, for instance, exemplifies this strategy. Through massive investments in infrastructure (particularly transportation corridors, ports, and energy networks) across Asia, Africa, and Europe, China aims to establish a dense network of trade routes and economic dependencies aligned with its national interests (M. S. Aiyar et al., 2023). Beyond traditional infrastructure, recent Chinese investments have also targeted renewable energy, electric mobility, and other low-carbon technologies, reflecting both economic foresight and geopolitical positioning in the context of global climate commitments.

This initiative demonstrates how Chinese FDI serves as a tool of economic diplomacy, designed not only to expand its economic footprint but also to build long-term political alliances and secure access to strategic resources. In response to heightened geopolitical uncertainties (particularly trade tensions with the United States) China has actively diversified its investment destinations. While it maintains a presence in both developed and emerging economies, it places growing emphasis on regions where it can exert more significant political or economic leverage. This includes expanding investments in Southeast Asia and Africa, where Chinese capital is often welcomed as a driver of development and where investment conditions can be more favorable to Chinese strategic interests (W. Chen et al., 2018).

Current geopolitical tensions have also prompted China to reconsider and strengthen its internal supply chains, particularly in advanced technology sectors. This is evident in its efforts to develop domestic capabilities in areas such as semiconductors and 5G technology, thereby reducing its dependence on foreign suppliers who may be affected by sanctions or trade restrictions (Jia et al., 2022).

While expanding its global influence, China must navigate between supporting its companies abroad and managing the repercussions of its investments on international relations. Criticisms of China's investment practices, including accusations of economic neo-colonialism and concerns about the debts imposed on BRI partner countries, illustrate the challenges it faces in optimizing its FDI strategy. These elements require careful management to avoid diplomatic conflicts while maximizing economic returns (Hurley et al., 2019).

This exploration of the Chinese case highlights the complexities of FDI strategies when they are closely tied to broader geopolitical and economic objectives. It also shows to what extent a country can use its foreign investments to strengthen not only its economic power but also its geopolitical stature on the global stage.

4.3   China's FDI Framework and Geopolitical Considerations

Foreign Direct Investment refers to an investment made by an individual or company in one country into business interests located in another country. According to the OECD, FDI entails a lasting interest and a significant degree of influence over the management of an enterprise in the host country. This distinguishes FDI from portfolio investments, which are more speculative and do not involve active managerial control.

FDI can take several forms, each reflecting distinct objectives and strategies. One prominent type is **Greenfield Investments**, which involve the creation of entirely new facilities in a host country. These investments often entail significant capital outlay, generate employment opportunities, and facilitate technology transfer, making them particularly impactful in developing regions. Another common form is **Mergers and Acquisitions (M&A)**, where investors acquire a controlling stake in an existing enterprise. This approach allows for immediate access to established markets, resources, and distribution networks, providing a strategic advantage to the investing entity.

Horizontal FDI refers to investments made in industries abroad that mirror the investor's domestic activities. For instance, a car manufacturer might set up production facilities in a foreign country to produce vehicles locally. In contrast, **Vertical FDI** targets operations along the supply chain. This can take the form of upstream investments, such as acquiring raw material suppliers, or downstream investments, like purchasing distribution channels or retail outlets to optimize market reach. Lastly, **Platform FDI** involves establishing operations in a host country with the specific aim of using it as a base for exporting to other markets. This type of investment is often driven by strategic geographic considerations and the need to optimize trade logistics.These forms of FDI highlight the diverse mechanisms through which international investments are executed and underline the strategic considerations influencing their deployment. In the case of China, FDI has played a pivotal role in its economic rise, driven by policies designed to attract foreign capital and expertise while progressively encouraging outbound investments.

Since the economic reforms initiated in 1978, China has progressively established itself as a major player in the global economy, transforming its development model to attract and integrate international capital flows. Under the leadership of Deng Xiaoping, the creation of the first Special Economic Zones (SEZs) (notably in Shenzhen, Zhuhai, Shantou, and Xiamen) marked a strategic turning point in China's openness to foreign investment. These zones provided generous tax incentives and a more flexible administrative framework, which stimulated industrial development and facilitated China's rapid integration into global value chains (Renard, s. d., 2018). The country's accession to the World Trade Organization (WTO) in 2001 represented a decisive milestone in its trade liberalization strategy, significantly boosting its export capacity and reinforcing

its integration into the global trading system. While FDI remained an important component of this process, it was primarily China's export-led growth model that drove its rise in manufacturing and technological competitiveness during this period.

Nonetheless, at the beginning of the 2000s, China undertook a strategic shift with the implementation of the "Go Out" policy, aimed at encouraging Chinese enterprises to invest abroad. This policy followed a dual rationale: securing access to natural resources essential for economic growth and opening new markets for its industries. Supported by state-owned enterprises, these initiatives targeted strategic sectors such as infrastructure, energy, and advanced technologies. The accumulation of vast foreign exchange reserves granted China a unique capacity to finance large-scale projects, thereby strengthening its economic influence in regions such as Africa, South Asia, and Latin America (Renard, s. d., 2018).

In 2013, China's economic expansion strategy took on a new dimension with the launch of the "Belt and Road Initiative". This ambitious project, announced by President Xi Jinping, aims to establish economic corridors linking Asia, Europe, and Africa (a region encompassing approximately 64% of the global population and 30% of the global GDP) (Huang, 2016). The BRI is based on two main components: the Silk Road Economic Belt, a land network connecting China to Europe via Central Asia, and the Maritime Silk Road, linking Asian, African, and European ports. These corridors are supported by massive investments in critical infrastructure, such as railways, ports, energy pipelines, and telecommunications networks.

The objectives of the BRI transcend purely economic considerations. By integrating the economies of partner countries into a global logistics network, China seeks to enhance its energy sovereignty, stimulate demand for its industrial overcapacity, and assert its geopolitical influence. For example, the China-Pakistan Economic Corridor (CPEC) and the modernization of the Port of Piraeus in Greece illustrate how China leverages infrastructure projects to achieve strategic objectives.

Beyond infrastructure development, the BRI encompasses political cooperation aimed at aligning development strategies, measures to facilitate trade by reducing tariff and non-tariff barriers, and substantial financial support through institutions such as the Asian Infrastructure Investment Bank (AIIB) and the Silk Road Fund. The BRI also promotes cultural, academic, and tourism exchanges to strengthen ties among participating nations. This integrated model of economic cooperation is based on principles of openness, mutual benefit, and inclusivity (Huang, 2016).

Beyond these macro-level ambitions, recent trends in Chinese outward FDI reveal a dual shift (both geographic and sectoral) that illustrates the evolving nature of China's global strategy under the BRI. As shown in Figure 29, the majority of Chinese FDI remains concentrated in East Asia and the Pacific, yet a noticeable expansion is occurring in Sub-Saharan Africa, Latin America, and parts of Europe and Central

Asia, reflecting a deliberate diversification of geopolitical partnerships. This regional rebalancing supports China's broader objective of enhancing its strategic presence across the Global South.

Simultaneously, a sectoral reorientation is also underway. As depicted in Figure 28, Chinese FDI is increasingly directed toward wholesale and retail trade, financial and insurance activities, and manufacturing sectors such as transport equipment and pharmaceuticals. This marks a transition from traditional infrastructure-heavy projects toward sectors with long-term commercial integration potential. These trends reflect a maturing investment strategy, aimed not only at securing access to resources and infrastructure development but also at deepening China's role in global value chains.

Taken together, these shifts in China's FDI portfolio highlight how the BRI serves as a platform to blend economic pragmatism with strategic influence. By leveraging financial and institutional instruments, and by expanding its presence across both new geographies and sectors, China uses its outward FDI not merely as an engine of economic expansion but as a tool to shape global economic governance and advance its geopolitical interests.

4.4   The Main Transmission Channels from Geopolitics to FDI

4.4.1   The Political and Institutional Channel

The political and institutional channel plays a crucial role in shaping foreign direct investment, particularly for China. This channel primarily manifests through the interaction of political systems, laws, regulations, and international relations.

Theoretically, companies are sensitive to political risks as these can directly influence operational costs and investment returns. FDI is attracted to politically stable environments where the risk of unpredictable upheavals is minimal. Stable governments are likely to maintain consistent policies, reducing uncertainty for foreign investors.

According to institutional theory (for instance, (North, 1990)) institutional frameworks shape economic interactions by defining the "rules of the game." Strong and predictable institutions reduce transaction costs and the risks of expropriation, thereby enhancing a country's attractiveness to foreign investors. In parallel, rational choice theory posits that investors behave strategically by evaluating political regimes and their stability in order to minimize the risks associated with abrupt policy changes that could threaten the profitability or security of their investments.

Empirically, several studies have validated the impact of political and institutional variables on FDI (Asiedu, 2006; Asiedu & Villamil, 2000; Aw & Tang, 2010; J. E. Campos et al., 1999; Gastanaga et al., 1998; Wei, 2000). (Jensen, 2003) demonstrated that democracies attract more FDI than authoritarian regimes because they generally offer greater predictability and legal security. (Q. Li & Resnick, 2003) found that democratic institutions positively influence FDI flows by reducing political uncertainty. Their results suggest that investors prefer environments where property rights are protected and where government policies are transparent and predictable.

In the Chinese context, studies by (Yu, 2020) revealed that China favors investments in countries where it can exert political or economic influence, often through bilateral agreements or regional initiatives. The "Belt and Road Initiative" is a prime example of this. These strategies aim to create a favorable environment for Chinese companies abroad by strengthening the institutions and political frameworks that support Chinese interests.

The political and institutional channel is essential for understanding the dynamics of Chinese FDI. According to theory, political stability, robust institutions, and international relations are key factors that would influence where and how China deploys its capital abroad (Yu, 2020).

4.4.2 The Economic Channel

The economic channel is essential for understanding how geopolitical considerations influence FDI, particularly for economies like China, where outward investment is deeply rooted in the pursuit of economic growth, export market expansion, and resource security. As a hybrid economy combining state-led strategies with market mechanisms, China uses FDI not only to achieve commercial objectives but also to reinforce its industrial upgrading and global competitiveness. This channel focuses on the impact of economic conditions and market opportunities on investment decisions.

Theoretically, FDI is heavily influenced by the economic prospects of host countries. According to Dunning's eclectic paradigm, investors evaluate location advantages, which include factors such as market size, economic growth, and the availability of natural or human resources. Companies seek to maximize their profits by investing in regions that offer high market potential, competitive production costs, or attractive tax incentives.

Raymond Vernon's product life cycle theory also suggests that international companies shift their production to foreign markets to exploit cost advantages and to be closer to local consumers, thereby reducing logistical costs and increasing market responsiveness.

Empirically, research has shown that economic variables such as GDP, per capita income, and trade openness are key determinants of FDI. (Chakrabarti, 2001) analyzed the importance of economic conditions in investment decisions, concluding that robust economies attract more investments due to their greater potential for growth and profit.

For China, studies such as those by (Buckley et al., 2015) have demonstrated that Chinese FDI decisions are strategically oriented towards countries with rapidly growing markets, partly to secure outlets for their exports and to gain access to essential resources. Additionally, the analysis by (Morck et al., 2008) highlighted that Chinese companies also invest abroad to avoid domestic regulatory and financial constraints, seeking more liberal and open economic environments.

Thus, the economic channel reveals that economic factors play a predominant role in FDI flows, often working in synergy with or in contrast to political and geopolitical dynamics. For China, this channel is not only a means to maximize economic returns but also a strategy to enhance the international competitiveness of its companies and navigate a complex global environment. Understanding these dynamics, supported by solid theoretical frameworks and empirical studies, offers valuable insights into the motivations and strategies behind Chinese FDI, illustrating how investment decisions reflect a combination of economic and strategic calculations.

4.4.3 The Security and Strategy Channel

The security and strategy channel is crucial for understanding how FDI can be used as a tool of foreign policy, particularly by countries like China, which often integrate national security and geopolitical strategy considerations into their investment decisions.

Theoretically, FDI can be viewed as an extension of a country's foreign policy, serving not only economic objectives but also strategic ones. According to realism in international relations theory, states primarily act to increase their power and security. Therefore, investments abroad are often directed towards strategic areas that can offer geopolitical or security advantages, such as access to critical resources, control of important trade routes, or influence in geopolitically sensitive regions.

Empirically, China uses its FDI to access essential natural resources and extend its influence in strategic regions. Studies like those by (Kolstad & Wiig, 2012) show that resource-rich countries often attract FDI from countries like China, which seeks to secure its energy and raw material supplies. These investments are strategically placed not only to gain economic benefits but also to strengthen China's international position and secure its long and often vulnerable supply chains.

Moreover, authors such as (Gonzalez-Vicente, 2012) have observed that Chinese FDI is frequently directed towards countries where China seeks to develop political influence, such as in Africa and Latin America, where its investments help build critical infrastructure while gaining the political support of local governments.

The security and strategy channel clearly illustrates that FDI is a component of a country's overall strategy, used to reinforce national security and exert geopolitical influence. For China, this means using FDI to create beneficial relationships that support its long-term objectives, such as diversifying its energy sources and expanding its global influence. These investments are meticulously planned to ensure they contribute to national security and supply stability, while also helping China build an image as a development partner in less developed regions.

These strategies, supported by theories and empirical research, highlight how China and other powers use FDI as a strategic lever to advance their interests on the global stage, demonstrating the importance of understanding the underlying motivations for FDI beyond purely economic criteria.

4.4.4   The Cultural and Communication Channel

The cultural and communication channel is essential for understanding the subtle nuances of FDI , particularly how cultural proximity and communication abilities influence investment decisions. This channel is crucial for countries like China, which seek to expand their global presence while navigating the cultural and linguistic complexities of international markets.

Theoretically, cultural proximity facilitates business interactions by reducing communication barriers and increasing mutual understanding, thereby lowering transaction costs and mitigating the risks associated with potential misunderstandings and conflicts. Geert Hofstede's cultural distance theory suggests that companies prefer to invest in countries with similar cultures because it reduces uncertainty and simplifies the management of foreign subsidiaries.

Empirically, several studies have validated the influence of culture on FDI. (Barkema et al., 1996) highlighted the challenges that cultural differences can pose to companies operating internationally, particularly how differences in communication, managerial practices, and professional values can impact investment performance. For China, studies by (Duanmu & Guney, 2009) demonstrated that Chinese companies perform better in culturally similar countries, where navigating the social and business landscape is easier.

Moreover, research by (Kogut & Singh, 1988) developed a cultural distance index that helps quantify cultural gaps between countries and predict potential difficulties in international operations. Chinese companies often use this index to evaluate potential markets and adapt their entry and management strategies to local cultural specifics.

The cultural and communication channel thus plays a significant role in FDI strategies, helping companies choose investment destinations where cultural barriers are minimal and communication is more straightforward. For China, this often means investing in countries with a significant Chinese diaspora or historical ties that facilitate the establishment and management of businesses. This channel highlights the importance of considering not only the economic and political aspects of FDI but also the cultural and communication dimensions that can significantly influence the success of companies abroad.

These dynamics, supported by solid theories and empirical studies, offer valuable insights into the motivations and strategies behind FDI, illustrating how an integrated approach that considers cultural factors can enhance the understanding and effectiveness of international investments.

4.5   Methodology and Data

4.5.1   Methodology

For this study, we adopt a fixed-effects panel model to analyze the impact of geopolitical factors on China's FDI stocks. The use of a fixed-effects model allows us to control for unobservable and time-invariant characteristics for each recipient country, thereby isolating the effect of the explanatory variables on FDI stocks.

The model specification is as follows:

Chapter 4: Geopolitical Distance and Chinese Foreign Direct Investment: Strategic Adaptations and Regional Dynamics

$$l\,n(FDI_{it}) = \alpha_i + \alpha_j + \delta_t + \beta_1 \cdot GeopoliticalDistance_{i,t-1} + \beta_2 \cdot Trade_{it} + \beta_3 \cdot l\,n\big(GDPpc_{it}\big) + \cdots$$
$$+ \beta_k \cdot X_{kit} + \epsilon_{ijt}$$

where :

$l\,n(FDI_{it})$ represents the natural logarithm of the stock of Chinese foreign direct investment in partner country i at time t. The terms α_i and α_j correspond to country fixed effects for the recipient and the origin country, respectively, while δ_t captures year fixed effects to account for global shocks and temporal dynamics.

The key variable of interest, $GeopoliticalDistance_{i,t-1}$, measures the political distance between China and country i, lagged by one year to reduce simultaneity bias and improve causal interpretation. $Trade_{it}$ refers to bilateral trade flows between China and the host country, while $GDPpc_{it}$ corresponds to the GDP per capita of the host country, expressed in logarithmic form.

The vector X_{kit} captures the remaining control variables, including rents from natural resources (such as oil and mining rents), the real effective exchange rate, indicators of institutional quality (such as bureaucratic quality, corruption levels, and investment risk), political conditions (including military involvement in politics), and geographical or geopolitical characteristics (such as physical distance and participation in regional trade agreements).

The error term, ϵ_{ijt}, is clustered at the dyadic level (country pair) to control for heteroskedasticity and potential serial correlation across bilateral observations over time.

Endogeneity

It is crucial to address the problem of endogeneity, particularly due to the potential for simultaneity bias, which occurs when our variable of interest in the regression model is correlated with the error term. This can lead to biased estimates and weaken the validity of the study's conclusions.

Chinese FDI can influence geopolitics in several ways. For instance, through their volume and strategic targeting, they can alter the political and economic balance in destination countries. By investing heavily in critical infrastructure or key sectors of a country's economy, China may gain significant political influence. This influence can affect the internal and external policies of the recipient country, thereby altering the

geopolitical distance between China and that country (either increasing it in the case of unfavorable reactions or decreasing it if the investments are perceived favorably).

Conversely, geopolitical distance can affect FDI flows. A large geopolitical distance, often indicating divergences in foreign policies or political values, can make a country less attractive to investors due to the increased perception of risks. Companies may hesitate to invest in countries where ideological and political barriers are high, preferring environments that are perceived as more stable and predictable.

To address the problem of endogeneity in our study, we use the first-order lag of geopolitical distance. This approach is based on the idea that the geopolitical positions of previous years influence current investment decisions while being less likely to be affected by contemporary FDI movements. By incorporating the geopolitical distance from the previous year, we assume that these values are not impacted by current levels of FDI, which allows for a clearer understanding of the direction of causality and reduces potential simultaneity bias.

This method is particularly useful for overcoming the challenges posed by geopolitical policies and international orientations that result from long and complex decision-making processes, often insensitive to the economic dynamics of a single year. The use of lagged data minimizes the risk that the variables of interest are simultaneously determined with FDI flows, providing a more accurate perspective on how past decisions influence current economic trends. This not only helps isolate the specific effects of geopolitical changes on FDI but also strengthens the validity of the estimates and the reliability of the conclusions drawn about the interaction between geopolitics and international economic investments.

4.5.2   Data

4.5.2.1   The Geopolitical Distance Variable

This study employs a nuanced measure of geopolitical distance derived from United Nations General Assembly (UNGA) voting data spanning 1946 to 2021, as developed by (Bailey et al., 2017). This variable quantifies the alignment of foreign policy preferences between nations over time.

The construction of this measure is based on an ordered logit model that evaluates voting outcomes (Yes, No, Abstain) as observable indicators of latent foreign policy preferences. Using a Bayesian hierarchical framework, the model estimates these preferences for each country annually. To ensure temporal consistency,

a bridging mechanism links resolutions with similar content across years, enabling dynamic comparisons of state preferences.

Geopolitical distance between two countries in a given year is then computed as the absolute difference between their estimated preference scores. Larger differences indicate greater divergence in foreign policy stances, while smaller differences reflect closer alignment.

This approach provides a robust tool for analyzing international relations by capturing the evolving dynamics of alliances, rivalries, and strategic interactions. It surpasses traditional dyadic measures, such as "S-scores" (measures of affinity between countries based on their UN voting patterns), by accounting for agenda shifts and isolating genuine preference changes from contextual noise. As such, it offers an indispensable lens for understanding the geopolitical underpinnings of global economic flows.

4.5.2.2   Control Variables

Economic Variables

We include **trade flows**, which capture bilateral exchanges in thousands of US dollars. These data, provided by Comtrade, indicate the intensity of economic relations. A high volume of bilateral trade is often perceived as an indicator of robust economic ties, likely to encourage FDI by strengthening economic links between China and the destination countries.

GDP per capita is a crucial economic indicator reflecting the size and prosperity of the recipient countries' economies. These data, provided by the World Bank, allow us to assess the economic capacity and market potential of the recipient countries. A larger and more prosperous economy is often more attractive to foreign investors as it offers expanded business opportunities and economic stability. Richer and more developed economies are expected to attract more Chinese FDI, signaling a potential positive impact of this variable on investments.

Mining and oil rents, sourced from World Bank data, measure the share of rents from natural resources in total GDP. These variables are particularly relevant for resource-rich countries, where foreign investment can be strongly influenced by the natural resources sector. The impact of these variables can vary. They can attract investment in specific sectors like mining or oil, but they may also indicate a less diversified economy that could suffer from resource price volatility.

The **Real Effective Exchange Rate (REER)** from the EQCHANGE database, which captures the relative value of a country's currency against a basket of currencies, adjusted for inflation differentials, reflects the

competitiveness of the destination country's economy by influencing the cost of goods and services in international trade. A higher REER implies that a country's goods become more expensive relative to its trading partners, potentially reducing export competitiveness and, by extension, decreasing its attractiveness for foreign investors. Conversely, a lower REER suggests that a country's goods are more competitive, potentially attracting more FDI by improving profit margins for foreign investors operating in the local market. Thus, fluctuations in the REER are expected to have a significant impact on Chinese FDI, as they affect both the cost of imports and exports, as well as the overall profitability of investments in the host country.

Institutional Variables

The **quality of bureaucracy** in the recipient countries from the International Country Risk Guide (ICRG), also plays a crucial role. A competent and stable bureaucracy is essential for a reliable regulatory environment, which is highly attractive to foreign investors, as it ensures government operations without major interruptions or drastic policy changes.

Government stability from the ICRG, is a key indicator of the government's ability to remain in power and implement its program. Foreign investors highly value political stability as it reduces uncertainty and ensures a secure investment environment.

The **investment profile** from the ICRG, takes into account contract viability, expropriation risks, and payment delays. A high index indicates a favorable environment that minimizes risks related to investment, which is crucial for attracting FDI. This suggests that a favorable environment, characterized by strong investor protection, is associated with a positive impact on FDI flows.

Corruption from the ICRG, reveals the level of corruption in the political system. Corruption can complicate business operations by distorting the economic and financial environment, reducing the efficiency of government and businesses. A high prevalence of corruption is likely to discourage FDI by introducing instability and reducing transparency, making it difficult to conduct business effectively.

Political and Social Variables

Military involvement in politics, from the ICRG, assesses the military's intervention in the political affairs of the recipient country. High military involvement can signal increased political risk, potentially deterring investors who prefer more stable environments. This variable often reveals situations of instability or political transition that can affect investment conditions.

Socioeconomic conditions assess socioeconomic pressures such as unemployment, consumer confidence, and poverty. These factors can limit government action or fuel social discontent, thereby increasing risks for foreign investment. Unfavorable conditions can signal a risky environment for FDI, as social instability can cause significant disruptions to business operations and investment.

Geopolitical Variables

The existence of **regional trade agreements**, documented by the World Trade Organization, indicates formal trade commitments between China and the destination countries. These agreements generally facilitate trade and investment by reducing tariff and non-tariff barriers, thereby promoting an increase in FDI. Integration into trade agreements is often seen as a sign of strong and stable international economic relations, having a positive expected impact on FDI flows.

The variable "**Physical distance**", which represents the logarithm of the physical distance between China and the recipient countries of FDI, is crucial for analyzing the impact of logistical costs on foreign investments. This measure reflects the challenges associated with transporting and managing operations over long distances, which can increase costs and complicate coordination between company headquarters and their foreign subsidiaries. Physical distance is traditionally seen as a barrier to trade and investment as it increases transportation costs and communication delays. For FDI, greater distance may make investment less attractive due to these additional costs and the operational difficulties associated with long-distance management.

4.5.2.3   Geopolitical Distance and FDI

Table 26 : Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
FDI stock (in million USD)	2249	5062.253	58037.709	0	1438530.9
Geopolitical distance	4093	.891	.797	0	4.663
Destination GDP per cap (in USD)	4133	10.254	15.904	.065	100.819
GDP (US$ 10000)	4184	3.284e+08	1.345e+09	132200	2.300e+10

Source: Authors' calculations based on CEPII databases

This study examines a **balanced panel dataset** covering 132 countries from 1990 to 2021. The stock of Chinese FDI, obtained through the UNCTAD database, shows an impressive average of **5,062.253 million USD**, with considerable variability, as indicated by a **standard deviation of 58,037.709 million USD** and a range from zero to a maximum of **1,438,530.9 million USD** in Hong Kong SAR. This region stands out as a major channel for Chinese capital, illustrating its role as a **global financial hub** and a gateway for Chinese

companies seeking international expansion. These points are supported by the work of (Cheung & Qian, 2009), which details Hong Kong's importance in facilitating the internationalization of Chinese firms.

The analysis also contrasts the levels of FDI in Hong Kong SAR with those of countries receiving relatively little investment, such as **Haiti, Paraguay, and El Salvador**. These countries, despite often needing foreign investment, receive less Chinese FDI due to factors such as **small market size**, **limited natural resources**, or **lower strategic importance** to China's economic objectives (Kolstad & Wiig, 2012).

Economically, the **average GDP of the countries** in the sample stands at **328.4 billion USD**, with GDP per capita ranging from **0.065 USD to 100,819 USD**. This wide range highlights the **economic disparities** among the countries studied, emphasizing the importance of understanding the **diverse economic contexts** that influence China's investment decisions.

The **geopolitical distance** between China and its partners varies from **0 to 4.663**, with an average of **0.891**. The highest level of geopolitical distance was recorded in **1995 between China and the United States**, a period marked by significant tensions related to divergences over **human rights** and **security**, as noted by (Shambaugh, 2000). Conversely, the lowest distance was observed with **Bangladesh in 2003**, reflecting a period of **harmonious bilateral relations**, strengthened by **common economic development initiatives**, as explained by (R. N. Choudhury, 2023).

4.6 Results of the Estimates and Discussions

4.6.1 Baseline Estimation Results

Table 27 : Impact of Geopolitical Distance on FDI Stocks

VARIABLES	(China) Logarithm of FDI stock	(France) Logarithm of FDI stock	(USA) Logarithm of FDI stock	(United Kingdom) Logarithm of FDI stock	(Russia) Logarithm of FDI stock	(India) Logarithm of FDI stock
L.Geopolitical distance	-.37373**	.62409*	-.24857	.56332	.31482	.28027
	(.15644)	(.36384)	(.25382)	(1.11865)	(.49072)	(.29886)
Bilateral Trade Flow	-.01773	.2114	.12839**	.02376	.21478	-.15222
	(.02634)	(.18004)	(.05984)	(.78041)	(.19738)	(.19731)
Quality of bureaucracy	.6173	.13968	-.88746**	.87101	.02136	-.74417*
	(.43673)	(.44597)	(.43122)	(1.80549)	(1.15195)	(.42815)
Military in politics	.20417*	-.16488	.13878	1.20218**	-1.76111**	.34576
	(.10814)	(.14553)	(.14757)	(.58471)	(.7099)	(.44545)
Government Stability	.01477	-.01116	-.02064	-.3328*	.00268	-.03457
	(.04808)	(.04619)	(.04922)	(.16792)	(.11653)	(.07702)
GDP per Capita	-.17163	.11735	-.04566	2.10838	1.72029	.0378
	(.27696)	(.38513)	(.52097)	(1.29147)	(1.17622)	(.60162)
Regional Trade Agreement	-.16711	-.01641	.36167	1.61007		.06771
	(.35048)	(.376)	(.2284)	(1.3483)		(.28629)
Mineral Rents	.013	-.11673	.02926	-.34432	-.01145	-.14837
	(.02215)	(.07909)	(.0319)	(.28469)	(.07587)	(.09211)
Oil rents	.00716	-.02985	.03134	-.05474	.14714***	.00332
	(.01143)	(.01917)	(.05044)	(.10875)	(.04514)	(.02281)
Globalization	-.0562	.08303*	-.08496	-.24477*	.00304	.00267
	(.04766)	(.04722)	(.05654)	(.1444)	(.07325)	(.06677)
Cost of starting business	.00197	-.00265	.00063	-.00693	.05047**	.00493
	(.00138)	(.0026)	(.00233)	(.0083)	(.02061)	(.00705)
Investment profile	-.01138	.01719	-.01434	.26829	-.12389	.02705
	(.06524)	(.06331)	(.04614)	(.25175)	(.13339)	(.09406)
Corruption Level	.21197*	-.17053	.34054**	-.43933	.34895	.22772
	(.12541)	(.11471)	(.15755)	(.51634)	(.36755)	(.22829)
Socioeconomic Conditions	-.06399	.01764	.14874*	-.16809	-.11741	.08891
	(.09204)	(.0649)	(.08896)	(.32631)	(.16261)	(.1205)
Physical distance	-13.84495***	-7.01285	-27.37317*	-71.39185	239.58132*	19.74932
	(1.35724)	(5.49888)	(14.77582)	(71.34222)	(141.92199)	(27.04963)
Real Effective Exchange Rate	.02109**	.23194***	-.0892***	-.07834	.09549*	.01954
	(.01009)	(.0372)	(.01176)	(.05746)	(.05144)	(.04506)
_cons	132.28407***	56.90227	257.26073*	599.60513	-1963.482*	-171.54935
	(14.61763)	(47.55317)	(132.75692)	(590.06532)	(1167.4893)	(238.20772)
Observations	1565	1361	1536	1227	758	726
R-squared	.89849	.91925	.90546	.75307	.87995	.8771
Pair FE	YES	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES	YES

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

The econometric analysis (Table 27)[17] highlights several key relationships that illuminate China's investment strategy. Focusing primarily on FDI stocks, the table shows that lagged geopolitical distance has a negative and significant effect on FDI. Specifically, an increase in geopolitical distance, meaning a weaker political alignment between China and a host country, leads to a decrease in Chinese FDI stocks in that country. This confirms that China prioritizes countries with which it shares common geopolitical interests, reducing its exposure to politically divergent environments. These results are consistent with the findings of (S. Aiyar et al., 2024).

Regarding physical distance, the coefficient is also negative and significant, suggesting that geographical proximity remains a determining factor in Chinese FDI decisions. The farther a country is from China, the less attractive it becomes for investments, likely due to higher transport and management costs (Bi et al., 2020). This result underscores the importance of the Belt and Road Initiative, an ambitious project aimed at overcoming these logistical obstacles by connecting China to various regions of the world through massive transport infrastructure (Xie et al., 2024).

Another notable result is the positive and significant effect of military involvement in politics on Chinese FDI. Unlike other major powers, China appears more willing to invest in environments where the military plays a significant role, possibly because these regimes can offer favorable and stable conditions for investments, despite apparent political instability (Bak & Moon, 2016).

The real effective exchange rate (REER) also plays a crucial role in China's FDI strategy. An appreciation of the REER in a host country is associated with an increase in FDI, reflecting China's interest in economies perceived as stable and reliable (K.-M. Chen et al., 2006).

On the other hand, other variables like bilateral trade flows or the quality of bureaucracy, while potentially influential, do not show a statistically significant effect in this model, suggesting that the impact of these factors may vary depending on the context or interact with other variables.

The results (column 1) confirm that China's investment strategy is based on a combination of geopolitical proximity, economic stability, and pragmatism in managing political risks. These elements reveal a nuanced approach where Chinese FDI decisions are influenced not only by classic economic factors but also by complex geopolitical considerations.

---

[17] Note: The coefficient for **Regional Trade Agreement** is omitted in the regression concerning Russia due to collinearity with fixed effects in the model. Collinearity occurs when this variable is highly correlated with other absorbed factors, such as time or regional fixed effects, leading to its exclusion. As a result, the impact of **Regional Trade Agreement** is captued indirectly within the fixed effects, leaving no independent variation to estimate. This omission does not indicate that the variable is irrelevant but that its effect is embedded within the fixed effects structure for Russia.

The analysis of other econometric regressions highlights not only the specificities of China's investment strategy but also the importance of comparing this approach with that of other major powers such as France, the United States, the United Kingdom, Russia, and India. These comparisons help better understand the uniqueness of the Chinese case.

Regarding **geopolitical distance**, the effects vary significantly depending on a country's global influence and historical ties. For major powers like China, an increased geopolitical distance substantially reduces FDI, as strategic considerations and alliance building play a crucial role in investment decisions. In contrast, for France, a former colonial power with deep historical and economic connections, particularly in Africa, investments often persist despite political divergences. This resilience is likely due to entrenched economic structures and cultural ties that mitigate the impact of contemporary geopolitical misalignments (Glaister et al., 2020). This contrast highlights how geopolitical distance operates differently for countries depending on their historical context and global standing. For smaller or less influential nations, the impact of geopolitical distance on FDI may be more pronounced, as they lack the entrenched networks or leverage of major powers. Furthermore, recent geopolitical developments, such as the emergence of the Alliance of Sahel States (ASS), could further disrupt France's influence in Africa, signaling shifts in these historically stable relationships (Nadzharov & Entina, 2023).

For the **United States**, the analysis (column 3) reveals that bilateral trade flows are a significant factor in its investment decisions, unlike China. The U.S. favors strong trade relations as a lever for its FDI. Moreover, bureaucratic quality is a crucial factor for American investments: inefficient bureaucracy strongly discourages U.S. companies (Sethi et al., 2003), a point where Chinese FDI appears to be more tolerant.

In contrast, **Russia** shows (column 5) a notably resource-centered investment strategy, as evidenced by the positive significant impact of oil rents on its FDI. Russia is also less sensitive to physical distance, which contrasts with China, where geographical proximity often plays a major role. However, China's investment strategy is more complex. While geographical proximity is crucial for facilitating logistics and reducing investment costs (especially in Asia as part of its regional integration efforts) China also invests heavily in distant countries with rich natural resources and strategic infrastructure, such as ports. This dual approach reflects differing strategic priorities: Russia seeks to strengthen its presence in resource-rich regions, while China combines regional integration with a global strategy of securing resources and influence through the BRI. Recent geopolitical developments, such as the emergence of the Alliance of Sahel States (ASS), could further alter these dynamics in regions where both powers compete for influence.

The **United Kingdom**, on the other hand, shows an interesting particularity with a positive and significant coefficient for military involvement in politics (column 4), revealing an investment strategy in regimes where the military plays a dominant role. While this behavior appears similar to China's, the motivations are likely

different. For instance, in Rwanda, (led by Paul Kagame and often described as a stable but authoritarian regime with strong military influence) the UK has developed strong economic ties, including significant aid and private investment initiatives. This suggests a preference for the stability provided by military-dominated regimes, which the UK views as conducive to predictable governance and investment security.

Conversely, China may perceive such environments as strategic opportunities to secure resources and develop infrastructure. These differing motivations highlight how great powers tailor their investment strategies based on political contexts and historical relationships. Recent studies highlight Rwanda as an example of effective governance despite its military influence, emphasizing its role as a regional hub for trade and investment in Africa (Booth & Golooba-Mutebi, 2012).

Finally, **India** stands out for its strong sensitivity to bureaucratic quality (column 6). Unlike China, India avoids countries where administrative institutions are inefficient, reflecting a more conservative and cautious approach in its investment decisions.

By comparing these major economic powers, it becomes clear that China adopts a distinct approach to geopolitical risk management. While countries like the United States and India are heavily influenced by bureaucracy and trade relations, or Russia focuses on energy resources, China skillfully navigates between geopolitical proximity and political risks, while concentrating on long-term economic opportunities. This unique strategy reflects China's ambition to extend its global influence not only through trade ties but also through a lasting presence in strategic regions.

4.6.2 Quantile Regression

Table 28 : Impact of Geopolitical Distance on FDI Stocks (Quantile regression fixed-effects)

	Logarithm of FDI stock Q25%	Logarithm of FDI stock Q50%	Logarithm of FDI stock Q75%
Geopolitical distance	-.61766***	-.67204***	-.72897***
	(.21999)	(.15625)	(.20316)
Bilateral Trade Flow	.1743***	.14538***	.11511***
	(.02931)	(.02087)	(.02706)
Quality of bureaucracy	.48122	.71495**	.95963**
	(.4067)	(.2891)	(.37555)
Military in politics	.21761**	.1695**	.11913
	(.10544)	(.07492)	(.09737)
Government Stability	-.15093***	-.20157***	-.25458***
	(.04256)	(.03036)	(.03928)
GDP per Capita	2.14366***	1.79764***	1.43541***
	(.20726)	(.1485)	(.19117)
Regional Trade Agreement	.6014**	.7593***	.92459***
	(.2872)	(.20416)	(.2652)
Mineral Rents	-.02626	-.02969*	-.03327
	(.02382)	(.01692)	(.022)
Oil rents	-.04146**	-.0483***	-.05545***
	(.01637)	(.01163)	(.01512)
Globalization	.15224***	.14829***	.14416***
	(.02485)	(.01765)	(.02295)
Cost of starting business	-.00336***	-.00342***	-.00347***
	(.00112)	(.0008)	(.00104)
Investment profile	-.37055***	-.30694***	-.24036***
	(.05536)	(.03948)	(.0511)
Corruption Level	.31031***	.34028***	.37165***
	(.10878)	(.07727)	(.10046)
Socioeconomic Conditions	-.10417	-.0118	.08489
	(.08278)	(.05903)	(.0764)
Physical distance	-4.73549*	-7.62326***	-10.64622***
	(2.44353)	(1.7414)	(2.25548)
Real Effective Exchange Rate	.00225	.00875	.01556
	(.02697)	(.01915)	(.0249)
Observations	1569	1569	1569
Pair FE	YES	YES	YES

Standard errors are in parentheses
*** p<.01, ** p<.05, * p<.1

The quantile regression method, developed by (Koenker & Bassett Jr, 1978) has been applied in this analysis. Quantile regression allows for capturing the heterogeneous effects of covariates across the conditional quantiles of the dependent variable, which is particularly useful in situations where there are asymmetries and long-tailed distributions. This method provides a deeper understanding of relationships between variables beyond the traditional mean-based approach. By exploring how different factors influence Chinese FDI

across various quantiles, this approach offers insights into how these effects vary at different points in the distribution of investments, particularly between smaller and larger FDI stocks. It is a powerful tool to assess the nuanced dynamics of China's FDI strategy and to uncover patterns that would be missed using conventional regression techniques.

The quantile regression[18] analysis for Chinese FDI (Table 28) reveals interesting dynamics across different levels of investment (Q25%, Q50%, and Q75%), providing a deeper understanding of how geopolitical and economic factors influence the intensity of Chinese FDI based on the size of the investments. This type of analysis highlights the particularities of China's investment strategy at different points of the FDI distribution, offering a nuanced perspective.

The impact of **geopolitical distance** is negative and highly significant across all quantiles, with increasing intensity as we move from smaller investments (Q25%) to larger ones (Q75%). The coefficient for the 25th percentile is -0.61766, and it becomes even more pronounced at the 75th percentile with a coefficient of -0.72897. This clearly indicates that the more geopolitically distant a country is from China, the less likely it is to receive Chinese FDI, and this effect is especially strong for larger investments. China appears to pay increasing attention to geopolitical considerations as the size and economic stakes of the investment grow, preferring to invest more significantly in politically aligned countries.

Bilateral trade flows have a positive and significant effect across all quantiles, although their impact slightly diminishes as the size of the investment increases. For the 25th percentile, the coefficient is 0.1743, but it decreases to 0.11511 at the 75th percentile. This suggests that strong trade relations facilitate Chinese FDI, especially for small and medium-sized investments. However, for larger investments, trade flows, while still positive, seem less decisive, likely due to the increased importance of geopolitical and institutional considerations.

The **quality of bureaucracy** has a positive effect that becomes significant starting at the 50th percentile (0.71495) and even stronger for the 75th percentile (0.95963). This indicates that China prioritizes larger investments in countries where administrative institutions are effective and stable (Moran et al., 2018; Ullah & Khan, 2017). Efficient bureaucracy reduces uncertainties related to regulatory risks, an essential element for long-term commitments, particularly for large-scale projects.

Military involvement in politics shows a positive and significant effect for small and medium investments (Q25% and Q50%, with coefficients of 0.21761 and 0.1695, respectively), but this effect disappears for larger investments (Q75%), where the coefficient becomes non-significant. This result suggests that China is more inclined to invest in politically unstable countries, often dominated by military regimes, when the investments

---

[18] Using the method of Machado, J.A.F. and Santos Silva, J.M.C. (2019), Quantiles via Moments, Journal of Econometrics, 213(1), pp. 145-173.

are smaller. For larger commitments, however, China prefers more stable environments without excessive military presence, reflecting a more cautious approach to risk management for long-term projects.

Government stability has a negative and significant effect across all quantiles, with increasing intensity as the size of the investments grows. The coefficient for the 25th percentile is -0.15093, and it reaches -0.25458 at the 75th percentile. Although counterintuitive at first glance, this result may indicate that China takes advantage of economic opportunities in environments where government stability is low, seeking to negotiate favorable terms. However, for larger investments, this may reflect China's risk management, where it capitalizes on politically unstable regimes while limiting its financial exposure.

GDP per capita is positively correlated with Chinese FDI across all quantiles, with high and significant coefficients ranging from 2.14366 for the 25th percentile to 1.43541 for the 75th percentile. This indicates that China favors investments in wealthier countries, where the potential for economic returns is higher, regardless of the size of the investment. More prosperous economies attract more Chinese FDI, although the effect slightly diminishes for larger investments, reflecting the growing importance of other factors in these contexts.

Regional trade agreements have a positive and significant effect across all quantiles, and this effect increases as we move from smaller investments to larger ones (from 0.6014 at Q25% to 0.92459 at Q75%). This shows that China values stable and integrated trade environments, especially for large projects where reducing trade barriers and facilitating exchanges become key success factors.

Mineral and oil rents show varied effects. While mineral rents are only significant at the median quantile, oil rents have a negative and significant effect across all quantiles, becoming more pronounced as the size of the investments grows. For the 75th percentile, the coefficient for oil rents is -0.05545, suggesting that China avoids concentrating large investments in economies overly dependent on oil resources, likely due to price volatility or heightened geopolitical risks in this sector (Ross, 2012).

Physical distance has a negative and significant effect on Chinese FDI, with coefficients ranging from -4.73549 to -10.64622. The farther a country is geographically, the less likely it is to receive Chinese FDI, especially for large investments, where logistical costs and challenges related to long-distance management become major obstacles. This effect is particularly strong for capital-intensive projects.

The quantile regression demonstrates that China's FDI strategy is shaped by a complex combination of geopolitical and economic factors Figure 20. As the size of investments increases, geopolitical proximity, institutional quality, and political stability become increasingly decisive. In contrast, for smaller investments, China seems more tolerant of unstable environments, where trade flows or military presence facilitate

opportunities. These results suggest that China adopts a differentiated strategy based on the scale of its commitments, adjusting its investments according to the specific risks and opportunities in each context.

4.7 Heterogeneity

4.7.1 Heterogeneous Effects by Income Level and Period

Table 29 : Impact of Geopolitical Distance on FDI Stocks by Income Level and Period

	(Advanced Economies)	(Emerging Market Economies)	(Low-Income Developing Countries)	(2001-2010)	(2011-2021)
VARIABLE	Logarithm of FDI stock	Logarithm of FDI stock	Logarithm of FDI stock	Logarithm of FDI stock	Logarithm of FDI stock
L.Geopolitical distance	-1.60079***	.33206*	.09074	-.47165**	-.44934***
	(.31433)	(.20027)	(.21315)	(.22266)	(.12678)
_cons	12.19766	72.40884	-18.45634	60.23953	275.97664
	(8.60639)	(47.01039)	(306.47729)	(45.38802)	(335.37278)
Observations	455	759	351	703	862
R-squared	.67329	.68068	.77498	.54761	.236
Pair FE	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES

Standard errors are in parentheses
*** $p<.01$, ** $p<.05$, * $p<.1$

The analysis of the impact of geopolitical distance on FDI based on the economic development level of the destination countries (Table 29) shows significant differences.

The analysis of the econometric results regarding heterogeneity across host countries' income levels and time periods highlights marked differences in China's FDI strategy. By breaking down the effects across advanced economies, emerging markets, and low-income developing countries, as well as between the periods of 2001-2010 and 2011-2021, this analysis provides deeper insights into how these factors influence Chinese FDI stocks.

Advanced Economies

In the case of advanced economies, geopolitical distance has a strongly negative and significant effect (-1.60079), indicating that China tends to avoid large investments in geopolitically distant countries. This result can be interpreted as a response to the increased risks these countries pose for China, both commercially and strategically. Advanced economies, particularly in Europe and North America, are often aligned with political and economic regimes that directly compete with China. For example, Sino-American trade tensions, which

escalated in 2018 with the imposition of tariffs under the Trump administration, heightened geopolitical distrust between these two powers, reducing Chinese investments in sensitive or strategic sectors. More generally, the alignment of advanced economies with geopolitical blocs such as the North Atlantic Treaty Organization (NATO) and their influence within international economic institutions make geopolitical distance a key risk factor for Chinese FDI. As a result, China prefers to limit its financial commitments in these countries unless particularly favorable conditions are met.

Emerging Markets

In emerging markets, geopolitical distance has a modest yet positive effect (0.33206), suggesting that China tolerates some political distance in its relations with these countries. This can be attributed to the substantial economic opportunities these markets offer and China's ability to negotiate advantageous bilateral agreements despite weaker political alignment. For instance, China's significant investments in Brazil as part of the BRICS cooperation framework illustrate this flexibility. Despite divergent political systems, China has established strong trade and investment partnerships with Brazil, particularly in agriculture and infrastructure. Similarly, China's engagement in the China-Pakistan Economic Corridor (CPEC) under the Belt and Road Initiative exemplifies its willingness to operate in politically complex environments. Despite challenges related to political instability and regional tensions, China has committed to large-scale investments in Pakistan's energy and transportation sectors.

Low-Income Developing Countries

In low-income developing countries, geopolitical distance has no significant effect, indicating that China is less sensitive to political alignment in these contexts. Chinese FDI in these countries is primarily motivated by immediate economic opportunities, such as access to natural resources or infrastructure projects, which are often crucial for local development. This relative indifference to geopolitical distance reflects China's pragmatic strategy to expand its influence in regions where international relations are less formalized.

Period Analysis

The division of the periods into 2001-2010 and 2011-2021 is justified by the major transformations that have shaped China's economic and geopolitical policy, influencing its FDI strategy. The 2001-2010 period marks a key phase in China's economic opening, beginning with its entry into the World Trade Organization (WTO) in 2001. During this decade, China experienced rapid economic growth, supported by its expanding role in global trade and its initial steps in outward investment, particularly in strategic sectors such as energy and infrastructure. Geopolitical relations were relatively stable, although emerging tensions (particularly with the United States) began to surface around issues related to intellectual property and economic competition.

However, the global financial crisis of 2008 serves as a critical inflection point, significantly reshaping global economic dynamics and influencing China's foreign investment strategy. This crisis highlighted vulnerabilities in the global financial system, prompting China to adopt policies aimed at reducing its dependency on Western markets and increasing its economic resilience. In the aftermath, China intensified its efforts to position itself as a global economic leader, preparing the ground for the more ambitious international expansion that characterizes the 2011-2021 period.

This second phase is marked by the launch of the BRI in 2013, through which China established itself as a key player in global infrastructure financing, particularly in Asia, Africa, and Eastern Europe (Fan et al., 2023; Huang, 2016). The initiative also allowed China to invest in strategically important yet geopolitically distant regions. At the same time, geopolitical tensions, especially with the United States, peaked in 2018 with the trade war under the Trump administration, pushing China to diversify its investments towards countries in the Global South (Huang, 2016). Despite challenges such as the COVID-19 pandemic, China maintained a proactive strategy by continuing to invest in these regions, further consolidating its role as a major global economic actor.

2001-2010 Period

Between 2001 and 2010 (Table 29), geopolitical distance had a negative and significant effect (-0.47165), indicating that China paid close attention to political alignment with its trade partners during this decade. This period, marked by China's entry into the WTO, strengthened trade relations with many developed countries but also heightened suspicion of its growing power. Consequently, China adjusted its investment strategy by prioritizing countries with stronger geopolitical alignment, particularly in East Asia and Southeast Asia (Ou-Yang & Kim, 2022).

2011-2021 Period

Between 2011 and 2021 (Table 29), the negative effect of geopolitical distance remained significant (-0.44934), although less pronounced. This period corresponds to the massive expansion of the Belt and Road Initiative, which allowed China to overcome certain geopolitical obstacles by investing in strategically important regions, even when they were geopolitically distant. However, geopolitical tensions (particularly with the United States) prompted China to diversify its investments towards regions with which it shares more convergent geopolitical and economic interests, especially in the Global South (S. Aiyar et al., 2024).

Moreover, the COVID-19 pandemic intensified geopolitical tensions between China and several Western powers, impacting investment flows. Despite these challenges, China maintained a proactive strategy, continuing to invest in infrastructure and technology, particularly in regions such as Asia and Africa, despite geopolitical distance with some of these countries.

Chapter 4: Geopolitical Distance and Chinese Foreign Direct Investment: Strategic Adaptations and Regional Dynamics

Geopolitical distance remains a key variable for understanding China's investment strategy, although its influence varies depending on the host country's income level and the period. China adopts a cautious approach in advanced economies, where geopolitical distance remains a significant obstacle, but demonstrates more flexibility in emerging markets and developing countries, where immediate economic considerations often outweigh political tensions. The key geopolitical events of the past two decades, such as the trade war with the United States and the expansion of the Belt and Road Initiative, have shaped how China adapts its investments in relation to geopolitical distance.

4.7.2 Regional Disparities in Effects

Table 30 : Impact of Geopolitical Distance on FDI Stocks at the Regional Level

VARIABLE	(Africa) Logarithm of FDI stock	(Asia) Logarithm of FDI stock	(Europe) Logarithm of FDI stock	(Latin america) Logarithm of FDI stock	(North America) Logarithm of FDI stock	(Oceania) Logarithm of FDI stock
L.Geopolitical distance	-.05859	-.86599**	-.66314	.53095	2.01065*	1.51813***
	(.13852)	(.34521)	(.49065)	(.32921)	(.6307)	(.01955)
Bilateral Trade Flow	.15749	-.00736	.2136	.33189	.0232	-.25672***
	(.31003)	(.09915)	(.17719)	(.29475)	(.00983)	(.00415)
Quality of bureaucracy	.81393**	-.14136	1.58842*	-3.42812**	-3.53772	
	(.39625)	(.31063)	(.84921)	(1.32343)	(3.77979)	
Military in politics	.13921	.02791	.52911	.49576	.17041	-1.27403**
	(.11205)	(.24699)	(.74331)	(.35508)	(.31099)	(.17595)
Government Stability	-.00613	.02552	.00763	.02555	.05238	-.16882***
	(.05932)	(.06907)	(.08708)	(.09042)	(.12209)	(.00516)
GDP per Capita	.82609**	-.06597	-1.01664	-.55464	-8.01371*	.69948***
	(.3765)	(.63994)	(.69636)	(1.51048)	(2.06956)	(.05074)
Regional Trade Agreement		-.74219**	1.84993***	-.82333*		-.21048***
		(.29616)	(.25652)	(.43712)		(.01447)
Mineral Rents	.00236	.05288	.2173	-.02192	1.50833	.16831**
	(.0228)	(.03825)	(.18574)	(.05636)	(.68005)	(.01843)
Oil rents	-.00943	-.00485	-.00274	-.03809	.02417	-.87184***
	(.01331)	(.01824)	(.05214)	(.04511)	(.04828)	(.02737)
Globalization	.06672*	.00314	-.06539	-.1146	-.13395	-.28997***
	(.03598)	(.07258)	(.08474)	(.07537)	(.10696)	(.00695)
Cost of starting business	.00007	.00957	-.01245	-.01029	.25647	.15576
	(.00093)	(.00974)	(.02489)	(.01156)	(.17107)	(.0603)
Investment profile	-.15691**	-.08727	.19204*	-.00959	-.06837	.27047***
	(.05742)	(.07873)	(.10652)	(.12082)	(.9051)	(.0166)
Corruption Level	.33028**	-.42319*	-.09008	.80886**	-.12272	.00372
	(.12011)	(.21465)	(.2968)	(.37972)	(.14135)	(.07583)
Socioeconomic Conditions	-.07604	.09786	-.14894	-.16094	.31718*	.03695**
	(.10462)	(.11252)	(.10414)	(.20542)	(.09852)	(.00613)
Physical distance	-18.79265	-8.66255**				
	(23.95082)	(3.10594)				
Real Effective Exchange Rate	.01286*	1.27142	-.02226	-.19989	6.88653**	5.13554***
	(.00663)	(.91304)	(1.37813)	(.31119)	(1.41396)	(.02318)
_cons	175.77013	73.88459**	5.26911	17.26407**	15.84967	5.98064***
	(224.04208)	(29.44589)	(8.70053)	(7.12761)	(13.3663)	(.56271)
Observations	440	322	480	237	51	38
R-squared	.94205	.93262	.90213	.90224	.99135	.99978
Pair FE	YES	YES	YES	YES	YES	YES
Time FE	YES	YES	YES	YES	YES	YES

The regional analysis of FDI[19] (Table 30) highlights significant differences in the influence of geopolitical distance and other economic and institutional factors across regions. Each region presents specific characteristics that reveal how China adjusts its FDI strategy according to the geopolitical, economic, and institutional context of each area.

Africa

In Africa, geopolitical distance has no significant effect on Chinese FDI, indicating that China is not heavily influenced by political considerations in this region. This observation is further illustrated by Figure 28 (Appendix C), which maps the geopolitical distance between China and African countries in 2020. The uniformity of China's engagement across the continent highlights the predominance of economic over geopolitical considerations. Chinese investments in Africa appear to be driven primarily by immediate economic opportunities, such as access to natural resources and the growing demand for infrastructure. This conclusion is further illustrated by Figure 31 (Appendix C), which shows the distribution of Chinese FDI stocks across African countries in 2020. The map highlights South Africa, the Democratic Republic of the Congo, and Zambia as major recipients of Chinese investments, reflecting the importance of resource wealth and economic hubs in shaping China's investment priorities. This visualization supports the argument that Chinese FDI in Africa is primarily guided by economic considerations rather than geopolitical alignment. This result aligns with China's role as a major trading partner and its position as the largest creditor to many African nations through initiatives like the Forum on China-Africa Cooperation (FOCAC). For instance, China has provided extensive loans and investments in countries such as Angola, often secured against oil exports, demonstrating a pragmatic approach that prioritizes economic benefits over political alignment (Figure 27).

Moreover, China tolerates political risks in exchange for the substantial economic benefits offered by the continent. For example, its investments in Sudan's oil sector and Angola's infrastructure projects illustrate a willingness to operate in politically unstable environments. In Sudan, China has invested heavily in oil extraction despite ongoing conflicts, while in Angola, Chinese financing has supported post-conflict reconstruction, particularly through the provision of loans secured by future oil revenues (Begu et al., 2018; I. Campos & Vines, 2008). These cases highlight that while the quality of bureaucracy plays a significant role

---

[19] Note: Some coefficients, such as **Quality of Bureaucracy**, **Physical Distance**, and **Regional Trade Agreement**, are omitted in certain models due to collinearity with fixed effects. This occurs when these variables are highly correlated with other absorbed variables in the model (e.g., time or region fixed effects), leading to their exclusion. As a result, the effects of these variables are already captured by the fixed effects, leaving no independent variation for estimation. This does not imply that these factors are irrelevant but rather that their influence is embedded within the fixed effects structure.

(coefficient: 0.81393) in ensuring the long-term success of projects, China's strategic focus remains on securing resources and strengthening economic ties in Africa.

Overall, these investments reflect a pragmatic and flexible strategy aimed at consolidating China's influence on the continent by addressing critical infrastructure and development gaps, while leveraging its economic resources to navigate political risks.

Asia

In Asia, geopolitical distance has a negative and significant effect on Chinese FDI, highlighting the importance of political relations in China's investment decisions. This region is particularly strategic for China, especially within the framework of the BRI, where it favors investments in politically aligned or geographically proximate countries. For example, China has made substantial investments in infrastructure projects in Pakistan through the China-Pakistan Economic Corridor (CPEC), a key component of the BRI that reflects shared geopolitical and economic priorities.

The positive effect of globalization (0.15021*) indicates that China places significant emphasis on Asian countries well integrated into the global economy, favoring stable environments open to trade. Partnerships with countries like Singapore, where economic ties and advanced infrastructure support FDI flows, illustrate this preference for integrated and predictable markets (Ou-Yang & Kim, 2022).

China's approach to Asia is based on a combination of political alignment and economic integration. This strategy reflects China's ambition to strengthen its role as a regional leader while securing long-term partnerships in trade- and investment-friendly environments.

Europe

In Europe, geopolitical distance has no significant effect on Chinese FDI, which may seem surprising given the recurring tensions between China and certain European countries over issues such as human rights and economic competition. However, this apparent neutrality can be explained by several factors. On the one hand, the European market remains a strategic economic target for China due to its wealth and importance for Chinese exports. Chinese investments are particularly focused on critical sectors such as infrastructure (ports, transportation networks) and technology, including acquisitions of strategic technological or industrial companies. On the other hand, regional free trade agreements and the high quality of European institutions facilitate these investment flows.

However, the technological dependency of certain European countries on China, coupled with growing security concerns in sectors such as 5G (e.g., the debate surrounding Huawei), shows that this relationship

remains complex and evolving. China's strategy in Europe thus oscillates between economic pragmatism and managing political frictions, while striving to maintain a presence in a market crucial to its global value chain.

Latin America

In Latin America, geopolitical distance has a positive but non-significant effect on Chinese FDI, reflecting a flexible approach in this region. Relations with countries such as Brazil and Argentina are primarily driven by economic opportunities, notably access to raw materials (soybeans, minerals) and agricultural markets. For example, China plays a key role in Brazil's agricultural exports while investing in Argentina's energy infrastructure, including renewable energy projects.

China also appears to favor less globalized environments where it can negotiate favorable terms, such as in Venezuela, where it continues to engage despite political and economic instability. This approach reflects pragmatism aimed at maximizing economic benefits while adapting to the region's varied institutional contexts.

North America

In North America, geopolitical distance has a positive and significant effect, reflecting the complexity of Sino-American relations, particularly after the 2018 trade war. This dynamic underscores the intricate dependency between the two economies, despite heightened political tensions. China continues to invest in strategic sectors in the United States, such as technology and real estate, although these investments are subject to rigorous scrutiny from American regulators. For instance, Chinese firms like Tencent and Alibaba have faced regulatory challenges when expanding into the U.S. market, reflecting the geopolitical sensitivity surrounding such investments.

Additionally, the economic interdependence is evident in critical supply chains, such as semiconductors and rare earth minerals, where both countries maintain significant mutual reliance despite ongoing disputes. This dependency complicates disengagement strategies and highlights the pragmatic approach adopted by both sides in navigating these tensions.

Corruption and GDP per capita also play significant roles, indicating that China targets wealthy markets, even in environments with high regulatory hurdles and political distrust. For example, the acquisition of the Waldorf Astoria by the Chinese insurance company Anbang in 2014[20] exemplifies China's interest in prestigious assets, despite the geopolitical complications that arise. These patterns suggest that China's

---

[20] (Cole, n.d.) https://www.forbes.com/sites/michaelcole/2014/10/06/chinese-insurer-buys-waldorf-astoria-for-a-record-1-95b/ consulted on 5 June 2024

strategy in North America combines economic pragmatism with a calculated tolerance for political risk, aiming to maintain a foothold in one of the world's wealthiest regions.

Oceania

In Oceania, geopolitical distance has a highly positive and significant effect, showing that despite growing political differences with countries like Australia, China continues to invest in the region, particularly in infrastructure and mining sectors. However, government instability has a negative effect, indicating that China avoids politically unstable environments in this region, in contrast to Africa, where immediate economic opportunities may compensate for instability.

The regional analysis shows that geopolitical distance plays a differentiated role in China's investment strategy depending on the region. While geopolitical distance is particularly significant in Asia and North America, China exhibits greater flexibility in Africa and Latin America, where economic motivations and access to resources take precedence. China adjusts its investments according to the institutional framework, political stability, and development level of each region, while accounting for the specific political and economic risks inherent to each area.

4.8   Conclusion

This study demonstrates that China's FDI strategy is a powerful tool in achieving its geopolitical objectives, showcasing a pragmatic and adaptable approach that varies according to regional contexts, the development levels of host countries, and the size of investments. Unlike traditional FDI models, largely influenced by geopolitical proximity to ensure stability in exchanges, China adopts a strategy that values the diversity and specificity of markets. China tends to favor countries with which it shares geopolitical affinities for large-scale investments, while demonstrating significant tolerance for political divergences in smaller projects, particularly in Africa and Latin America. This adaptability, highlighted by our quantile regression analysis, reflects China's keen awareness of geopolitical risks and its economic opportunism, especially in resource-rich economies or strategically located regions.

The results suggest that China has leveraged its "friend-shoring" policy through the Belt and Road Initiative, aimed at reducing logistical and geopolitical barriers. This policy yields not only economic but also political advantages, as China solidifies its ties with developing and emerging economies that play a crucial role in extending its global influence. Regional analysis also reveals marked disparities: in Asia, China favors

geopolitically aligned countries, while in Latin America and Africa, where immediate economic gains are available, political proximity becomes secondary.

In this sense, the study sheds light on the complexity of balancing national security and economic development goals in China's FDI decisions. Unlike Western powers, which may hesitate to invest in politically unstable or highly militarized regimes, China sometimes perceives these environments as opportunities to negotiate favorable deals. This approach amplifies its influence in regions where economic competition is low or where Western aid is diminishing.

China's differentiated approach reflects a period of heightened tensions, particularly with the United States and the European Union, which prompts a strategic pivot towards the Global South. These investments function as geopolitical levers, allowing China to position itself as a development partner for emerging economies and strengthen strategic alliances in response to global power shifts.

In conclusion, this work enriches the understanding of contemporary geopolitical dynamics by revealing the inherently geostrategic nature of Chinese FDI, which extends beyond mere profit-seeking. It is part of a broader vision to shape a new global order where China assumes a central role. In this regard, the study paves the way for future research on the interactions between investment, regional alliances, and global geopolitical transformations, particularly in an era of "slowbalisation." The implications of this Chinese strategy suggest profound economic reconfigurations and raise important questions for policymakers and scholars about the impacts of these investments on regional stability, economic dependency, and China's influence in the decades ahead.

Appendix C

Figure 16 : Joint evolution of geopolitical distance and incoming FDI flows
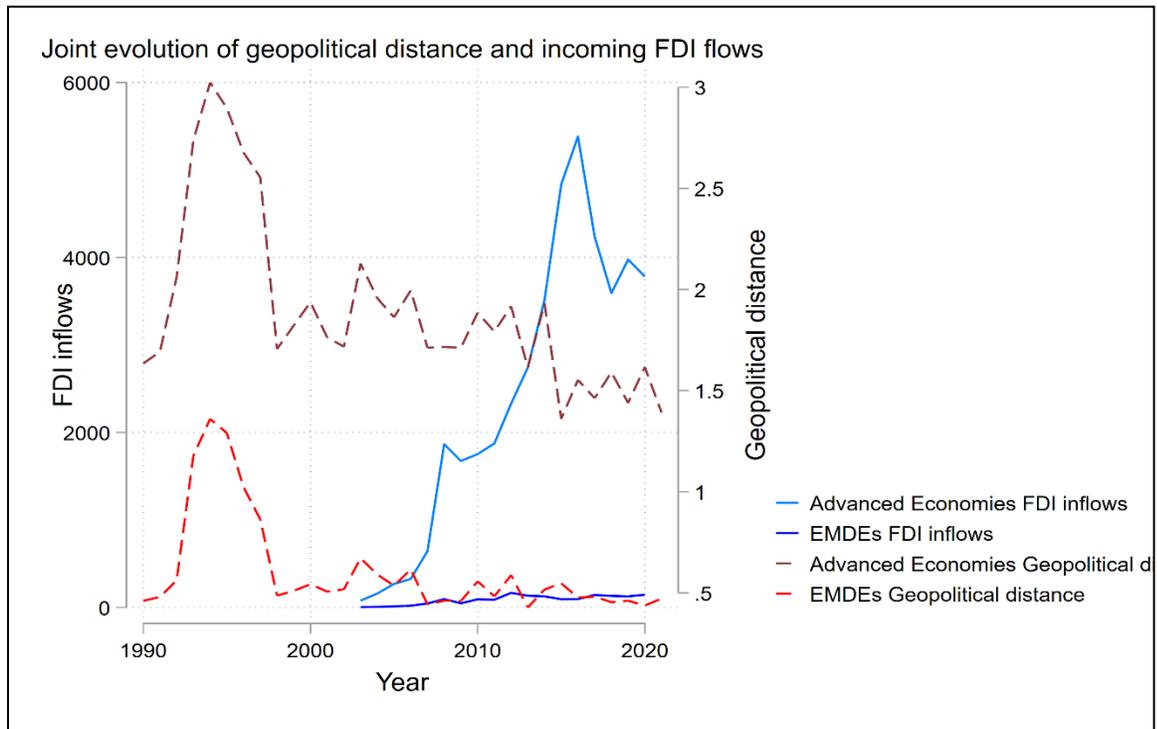
Appendix C

Figure 17 : Joint Evolution of Geopolitical Distance and FDI Inflows (1990–2020)
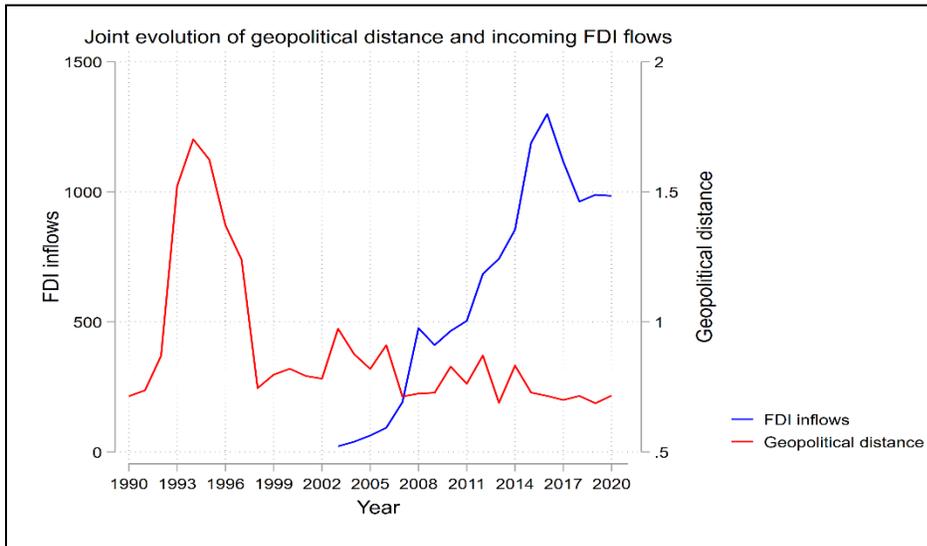
Source: Authors' calculations based on United Nations General Assembly Voting Data (Bailey et al.) and UNCTAD database

Figure 18 : Dynamics of Geopolitical Distance and Chinese FDI Accumulation by income

Appendix C
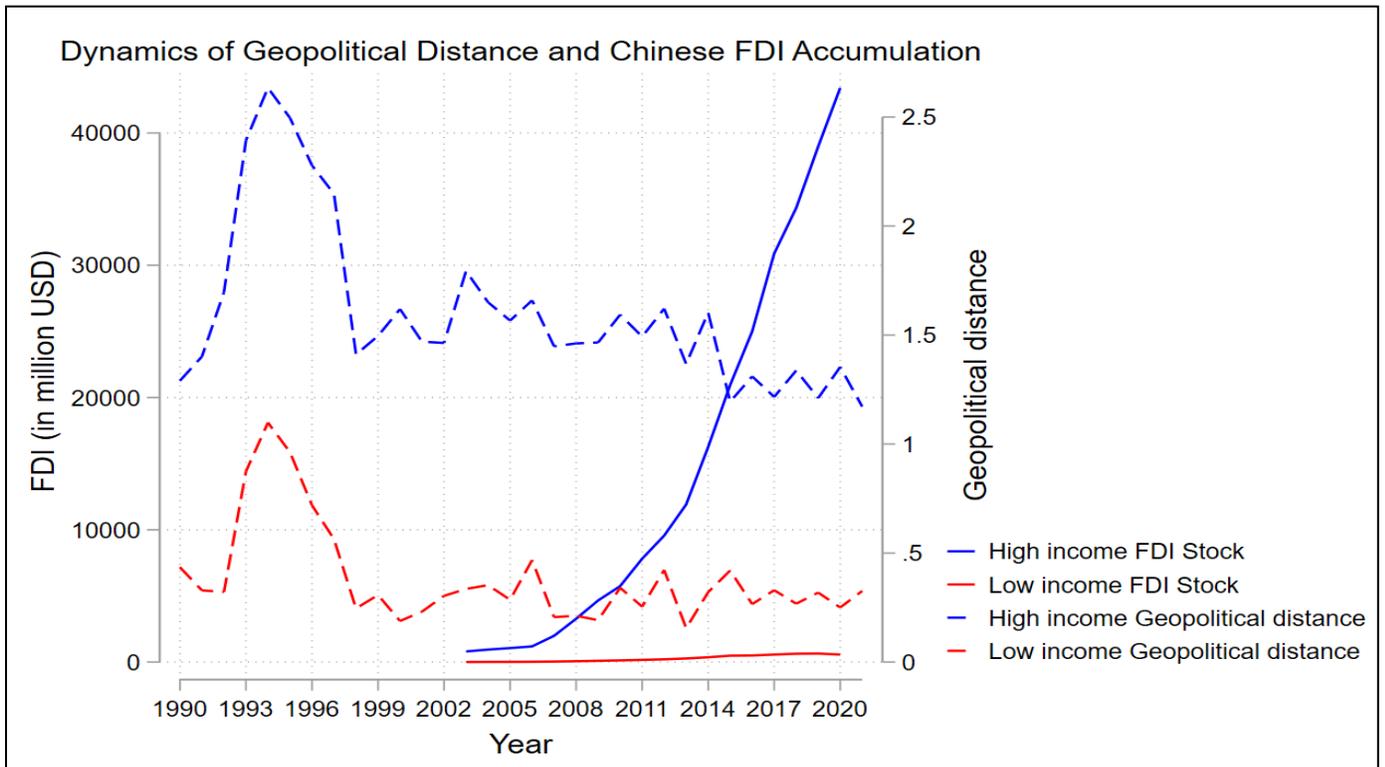
Figure 19 : Dynamics of Geopolitical Distance and Chinese FDI Accumulation

Appendix C
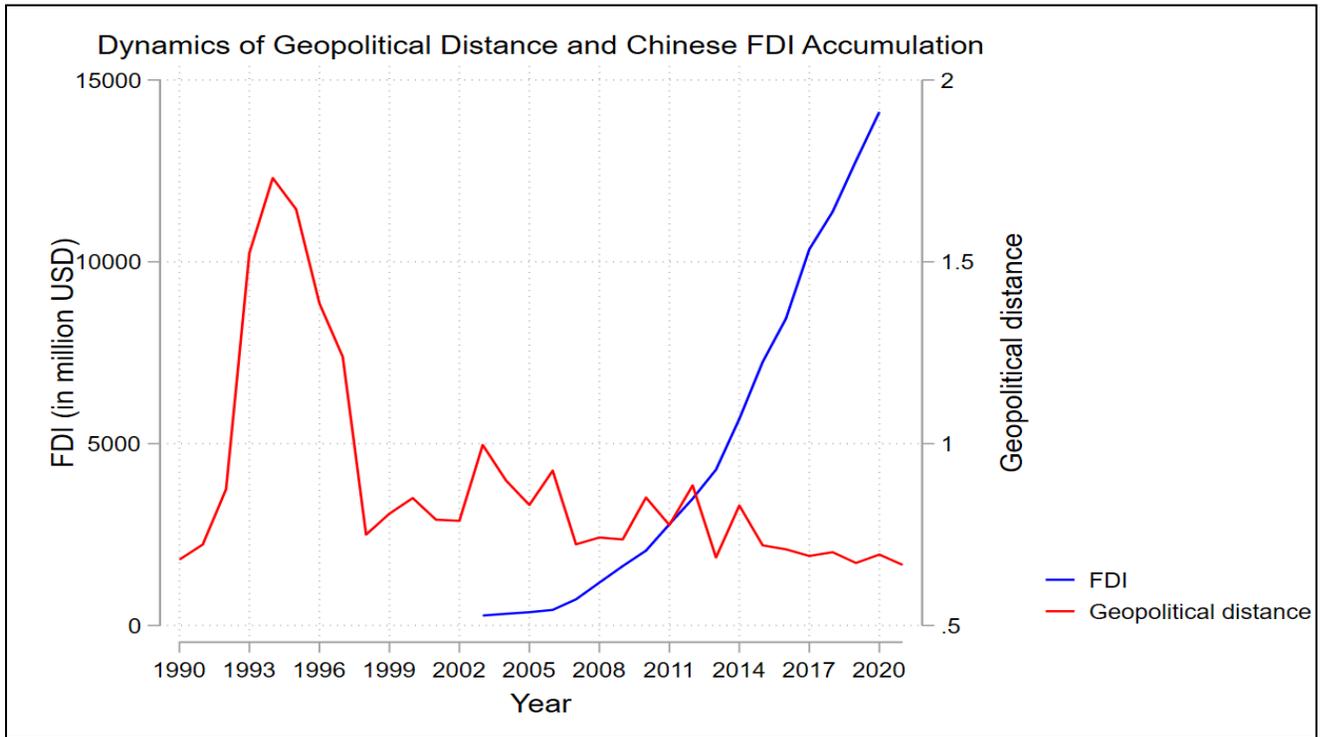
Figure 20 : Quantile Regression Results for Various Geopolitical and Economic Indicators

**Source**: Authors' calculations based on estimates results.

Appendix C
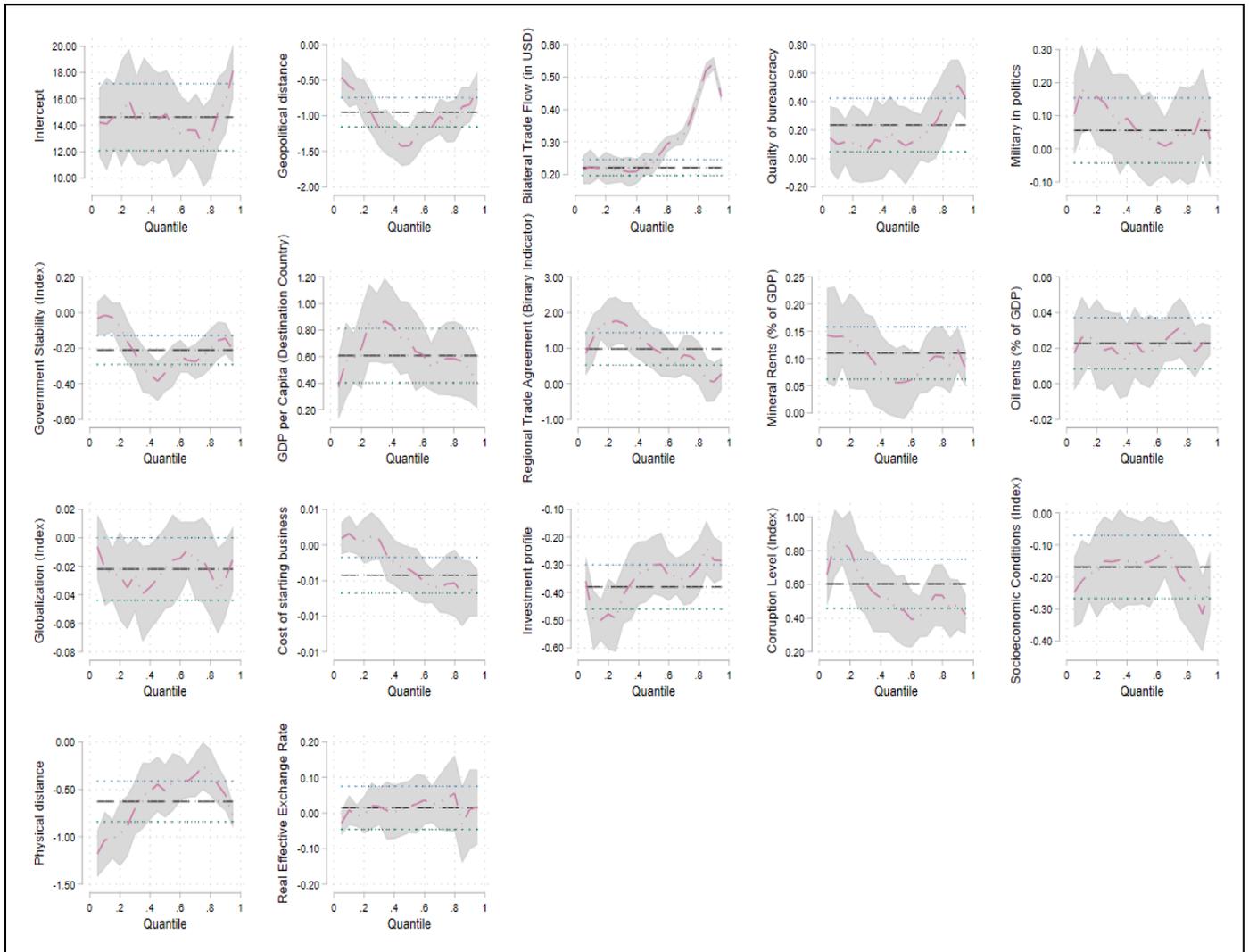
Figure 21 : Share of China's FDI Stock by Geopolitical Distance Quartiles
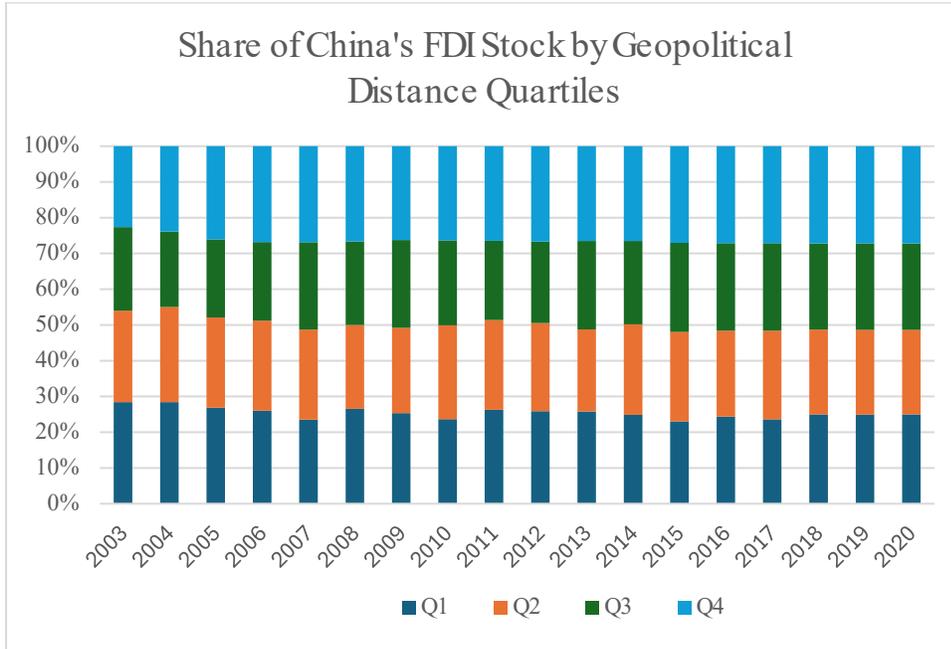
Source: Authors' calculations based on United Nations General Assembly Voting Data (Bailey et al.) and UNCTAD database

Note: Quartiles represent groups of countries ranked by their geopolitical distance from China, with Q1 being the closest, followed by Q2 and Q3, and Q4 representing the most geopolitically distant countries.

Figure 22 : Share of U.S. FDI Stock by Geopolitical Distance Quartiles
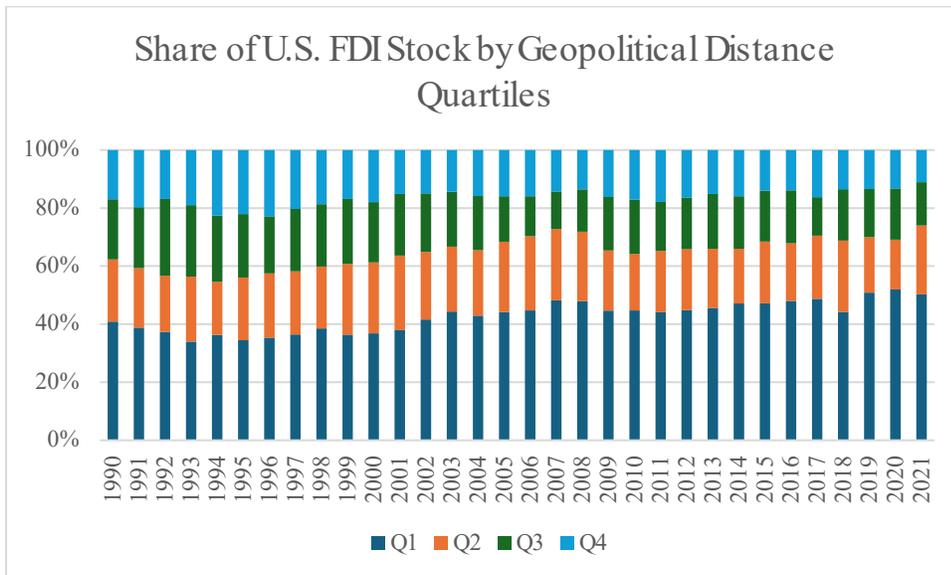
Source: Authors' calculations based on United Nations General Assembly Voting Data (Bailey et al.) and UNCTAD database

Note: Quartiles represent groups of countries ranked by their geopolitical distance from US, with Q1 being the closest, followed by Q2 and Q3, and Q4 representing the most geopolitically distant countries.

114

Figure 23 : Share of France's FDI Stock by Geopolitical Distance Quartiles
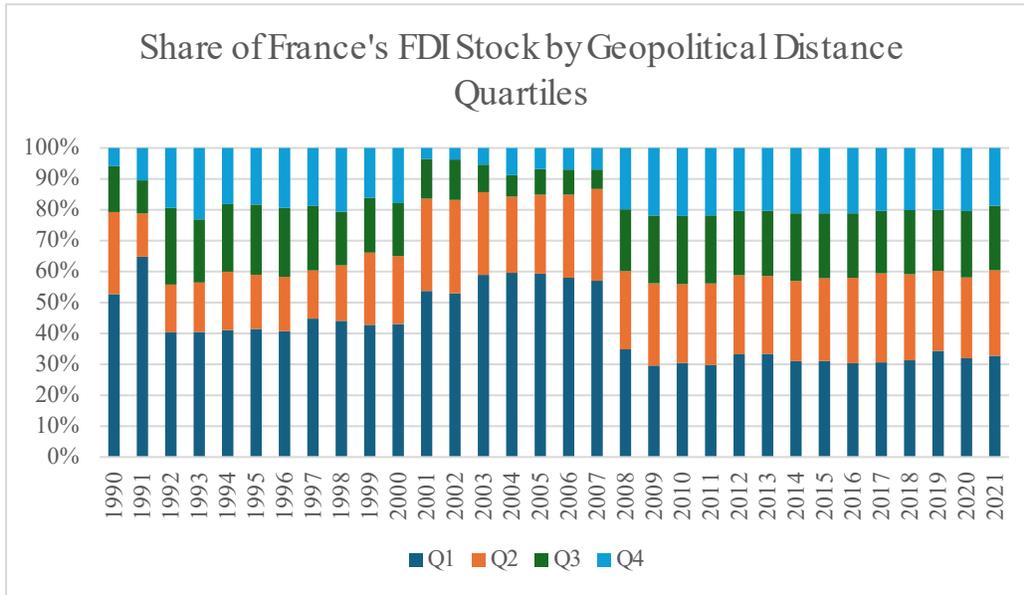
Share of France's FDI Stock by Geopolitical Distance Quartiles

Source: Authors' calculations based on United Nations General Assembly Voting Data (Bailey et al.) and UNCTAD database

Note: Quartiles represent groups of countries ranked by their geopolitical distance from France, with Q1 being the closest, followed by Q2 and Q3, and Q4 representing the most geopolitically distant countries.

Figure 24 : Share of U.K.'s FDI Stock by Geopolitical Distance Quartiles
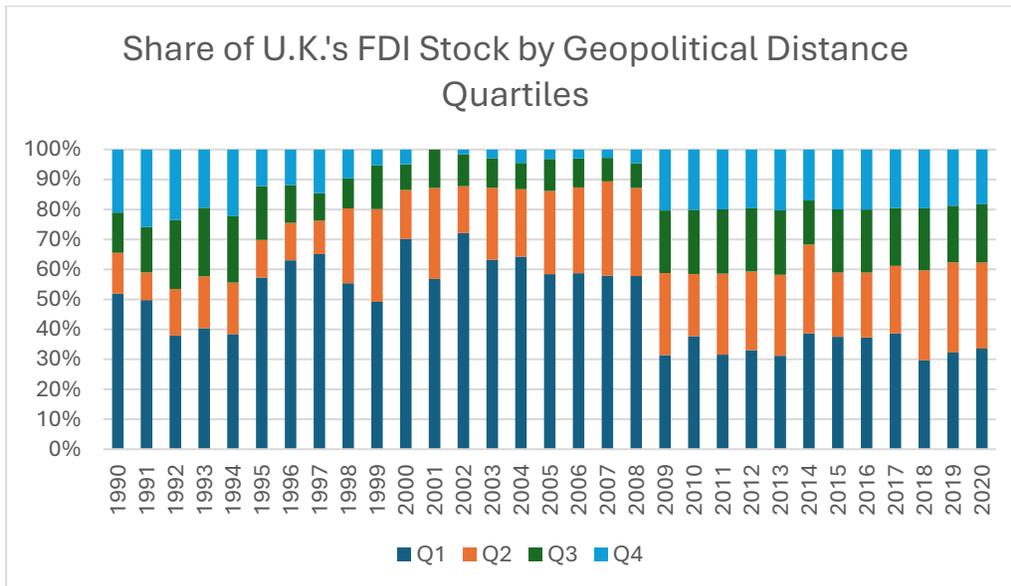
Share of U.K.'s FDI Stock by Geopolitical Distance Quartiles

Source: Authors' calculations based on United Nations General Assembly Voting Data (Bailey et al.) and UNCTAD database

Note: Quartiles represent groups of countries ranked by their geopolitical distance from UK, with Q1 being the closest, followed by Q2 and Q3, and Q4 representing the most geopolitically distant countries.

Figure 25 : Share of Russia's FDI Stock by Geopolitical Distance Quartiles
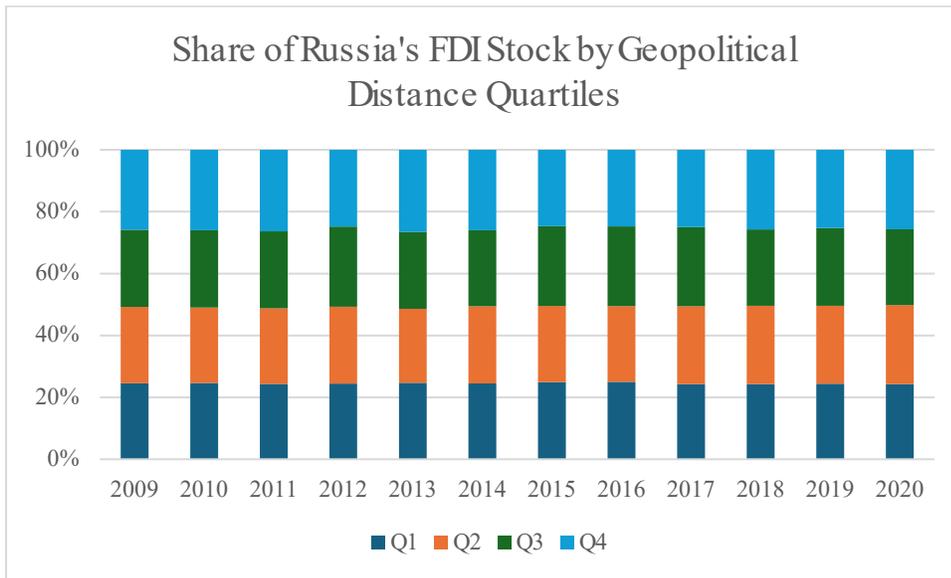

Source: Authors' calculations based on United Nations General Assembly Voting Data (Bailey et al.) and UNCTAD database

Note: Quartiles represent groups of countries ranked by their geopolitical distance from Russia, with Q1 being the closest, followed by Q2 and Q3, and Q4 representing the most geopolitically distant countries.

Figure 26 : Share of India's FDI Stock by Geopolitical Distance Quartiles
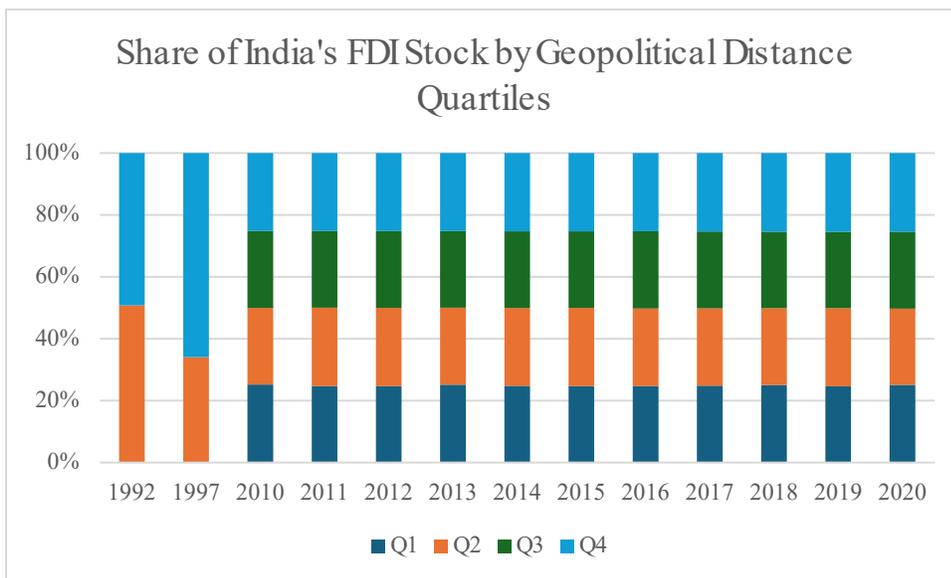
Source: Authors' calculations based on United Nations General Assembly Voting Data (Bailey et al.) and UNCTAD database

Note: Quartiles represent groups of countries ranked by their geopolitical distance from India, with Q1 being the closest, followed by Q2 and Q3, and Q4 representing the most geopolitically distant countries.

Appendix C

Figure 27 : The Chinese Loans to Africa
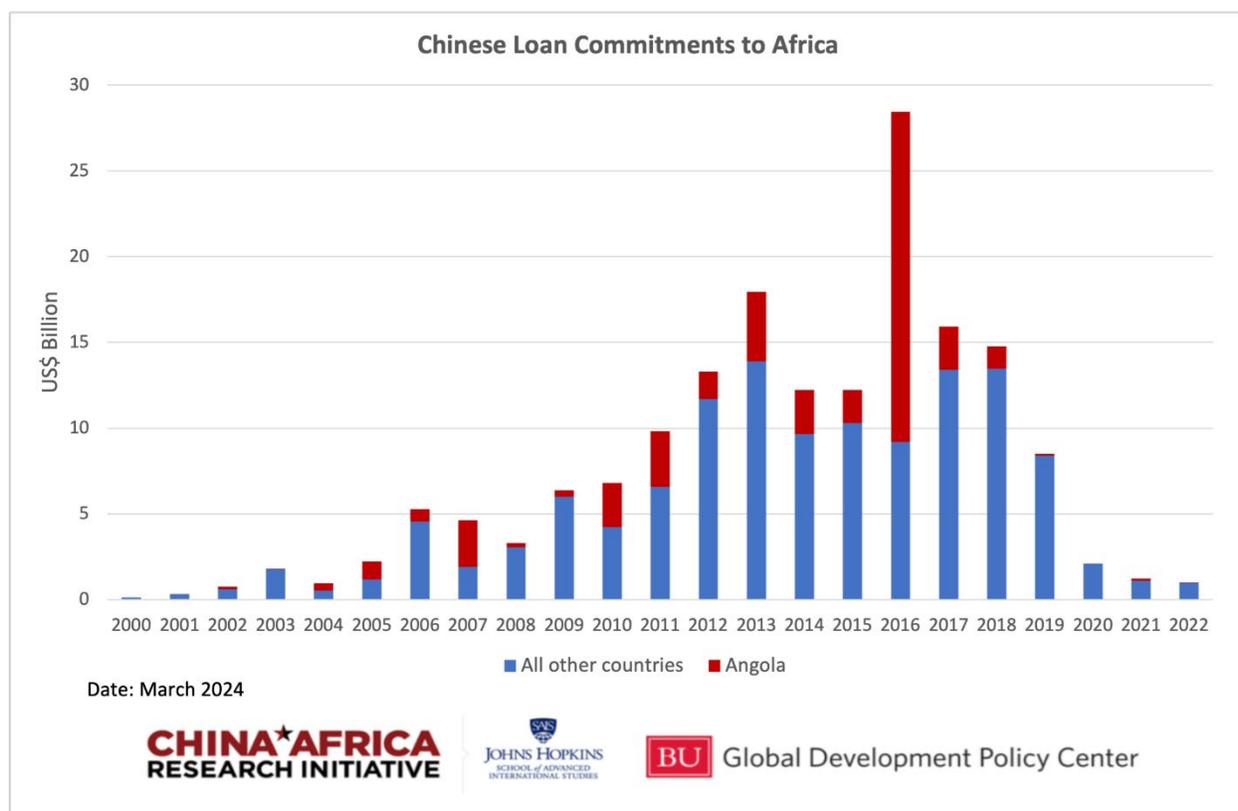
Table 31 : Descriptive Statistics (all variables)

Variable	Obs	Mean	Std. Dev.	Min	Max
FDI stock (in million USD)	2249	5062.253	58037.709	0	1438530.9
Geopolitical distance	4093	.891	.797	0	4.663
Bilateral Trade Flow (in USD)	3280	.991	3.786	0	56.32
Quality of bureaucracy	3264	2.19	1.127	0	4
Military in politics	3264	3.88	1.721	0	6
Government Stability (Index)	3264	7.768	1.824	1	12
Destination GDP per cap (in USD)	4133	10.254	15.904	.065	100.819
Regional Trade Agreement (Binary	4199	.046	.209	0	1
Mineral Rents (% of GDP)	4151	.84	2.365	0	28.813
Oil rents (% of GDP)	4126	4.111	10.032	0	65.158
Globalization (Index)	4008	56.989	16.562	20.469	91.141
Cost of starting business (% of GNI per capita)	2192	49.478	118.306	0	1540.2
Investment profile (Index)	3264	7.836	2.354	0	12
Corruption Level (Index)	3264	2.884	1.274	0	6
Socioeconomic Conditions (Index)	3264	5.604	2.283	0	11
Physical distance	4199	9705.996	4040.637	867	19629
Real Effective Exchange Rate	4070	1083528.2	48889639	0	2.270e+09

Appendix C

Table 32 : Summary statistics by Partner's region

Africa

	Mean	SD	Min	Max
FDI stock (in million USD)	471.041	941.868	0.020	7472.77
Geopolitical distance	.382	.311	0.000	1.641
Bilateral Trade Flow (in USD)	.096	.237	0.000	1.709
Quality of bureaucracy	1.448	.802	0.000	4
Military in politics	2.806	1.51	0.000	6
Government Stability (Index)	7.859	1.954	1.833	11.083
Destination GDP per capita (in USD)	1.485	2.003	0.065	15.853
Regional Trade Agreement (Binary	0	0	0.000	0
Mineral Rents (% of GDP)	1.135	2.751	0.000	28.249
Oil rents (% of GDP)	4.803	10.931	0.000	64.816
Globalization (Index)	45.471	9.786	22.473	70.391
Cost of starting business (% of GNI per capita)	110.635	188.254	0.000	1540.2
Investment profile (Index)	6.947	1.865	0.000	11.5
Corruption Level (Index)	2.346	.883	0.000	5
Socioeconomic Conditions (Index)	4.051	1.492	0.500	8
Physical distance	11579.68	1317.792	8370.000	13494
Real Effective Exchange Rate	3508087.2	87948214	0.000	2.270e+09

Asia

	Mean	SD	Min	Max
FDI stock (in million USD)	1784.5	5181	0.010	59857.85
Geopolitical distance	.662	.689	0.000	4.39
Bilateral Trade Flow (in USD)	1.239	2.855	0.000	18.848
Quality of bureaucracy	2.301	.922	0.000	4
Military in politics	3.775	1.513	0.000	6
Government Stability (Index)	8.109	1.928	1.000	12
Destination GDP per capita (in USD)	10.485	15.588	0.115	93.714
Regional Trade Agreement (Binary	.112	.316	0.000	1
Mineral Rents (% of GDP)	.87	2.418	0.000	26.573
Oil rents (% of GDP)	8.034	14.149	0.000	65.158
Globalization (Index)	53.823	14.789	20.660	84.36
Cost of starting business (% of GNI per capita)	25.681	45.066	0.200	534.8
Investment profile (Index)	7.85	2.289	0.000	12
Corruption Level (Index)	2.6	.985	0.083	5
Socioeconomic Conditions (Index)	6.128	2.295	0.500	11
Physical distance	4899.803	2087.572	867.000	8004
Real Effective Exchange Rate	108.108	71.136	0.072	1105.807

Europe

	Mean	SD	Min	Max
FDI stock (in million USD)	1077.687	3385.712	0.040	26041.29
Geopolitical distance	1.728	.6	0.018	4.063
Bilateral Trade Flow (in USD)	.694	1.293	0.000	7.539
Quality of bureaucracy	2.99	1.017	1.000	4
Military in politics	5.414	.775	2.667	6
Government Stability (Index)	7.684	1.563	2.917	11.5
Destination GDP per capita (in USD)	20.748	20.199	0.218	100.819
Regional Trade Agreement (Binary	.01	.102	0.000	1
Mineral Rents (% of GDP)	.167	.482	0.000	5.395
Oil rents (% of GDP)	1.357	4.636	0.000	39.581
Globalization (Index)	72.961	14.111	28.002	91.141
Cost of starting business (% of GNI per capita)	6.74	8.233	0.000	57.1
Investment profile (Index)	8.965	2.339	2.000	12
Corruption Level (Index)	3.704	1.39	1.000	6
Socioeconomic Conditions (Index)	7.012	2.025	1.333	11
Physical distance	8362.759	909.282	6373.000	10732
Real Effective Exchange Rate	95.558	16.296	3.666	198.077

Latin america

	Mean	SD	Min	Max
FDI stock (in million USD)	443.96	798.164	0.000	4434.78
Geopolitical distance	.622	.442	0.000	3.054
Bilateral Trade Flow (in USD)	.263	.576	0.000	3.963
Quality of bureaucracy	1.863	.727	0.000	3
Military in politics	3.408	1.449	0.500	6
Government Stability (Index)	7.374	1.597	3.333	11
Destination GDP per capita (in USD)	4.844	3.869	0.244	18.704
Regional Trade Agreement (Binary	.064	.246	0.000	1
Mineral Rents (% of GDP)	1.078	2.354	0.000	16.87
Oil rents (% of GDP)	1.981	4.473	0.000	28.06
Globalization (Index)	58.033	8.612	33.210	77.115
Cost of starting business (% of GNI per capita)	37.592	45.189	0.700	393
Investment profile (Index)	7.501	1.973	2.500	11.5
Corruption Level (Index)	2.585	.908	0.000	5
Socioeconomic Conditions (Index)	5.226	1.406	1.000	8.083
Physical distance	16292.056	2102.7	13896.000	19629
Real Effective Exchange Rate	107.808	163.787	13.690	3600.28

North america

	Mean	SD	Min	Max
FDI stock (in million USD)	10757.201	21047.287	0.000	80047.71
Geopolitical distance	1.673	1.325	0.025	4.663
Bilateral Trade Flow (in USD)	10.425	15.443	0.014	56.32
Quality of bureaucracy	2.665	1.653	0.000	4
Military in politics	3.952	2.1	0.000	6
Government Stability (Index)	7.572	1.881	1.833	11
Destination GDP per capita (in USD)	21.748	20.343	0.239	69.288
Regional Trade Agreement (Binary	0	0	0.000	0
Mineral Rents (% of GDP)	.18	.24	0.000	1.365
Oil rents (% of GDP)	1.211	1.544	0.000	6.846
Globalization (Index)	63.6	18.702	26.112	84.479
Cost of starting business (% of GNI per capita)	71.254	115.535	0.300	415.4
Investment profile (Index)	8.304	3.301	1.000	12
Corruption Level (Index)	3.337	1.674	1.000	6
Socioeconomic Conditions (Index)	6.199	3.327	0.000	11
Physical distance	12639.5	1107.643	11441.000	14306
Real Effective Exchange Rate	92.176	18.742	35.994	129.401

Oceania

FDI stock (in million USD)	6047.55	11258.165	3.310	38378.68
Geopolitical distance	1.37	.667	0.008	2.854
Bilateral Trade Flow (in USD)	1.174	1.724	0.002	6.105
Quality of bureaucracy	3.418	.864	2.000	4
Military in politics	5.356	1.008	2.292	6
Government Stability (Index)	7.482	1.88	2.000	10.917
Destination GDP per capita (in USD)	22.649	19.728	0.530	67.525
Regional Trade Agreement (Binary	.198	.401	0.000	1
Mineral Rents (% of GDP)	3.823	4.93	0.035	19.328
Oil rents (% of GDP)	2.342	3.503	0.003	15.134
Globalization (Index)	64.674	15.628	35.836	81.225
Cost of starting business (% of GNI per capita)	7.812	10.489	0.100	28.8
Investment profile (Index)	8.937	2.659	3.083	12
Corruption Level (Index)	4.119	1.581	1.000	6
Socioeconomic Conditions (Index)	6.948	2.572	2.333	10.292
Physical distance	7498.562	1698.617	5271.000	9361
Real Effective Exchange Rate	95.254	16.244	66.700	132.726

Appendix C

Table 33 : Matrix of correlations

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
FDI stock (in million USD)	1.000																
Geopolitical distance	0.183	1.000															
Bilateral Trade Flow (in USD)	0.610	0.383	1.000														
Quality of bureaucracy	0.243	0.619	0.316	1.000													
Military in politics	0.108	0.483	0.091	0.626	1.000												
Government Stability (Index)	-0.040	-0.146	-0.034	-0.123	-0.027	1.000											
Destination GDP per cap (in USD)	0.322	0.550	0.324	0.741	0.550	-0.007	1.000										
Regional Trade Agreement (Binary	0.190	-0.107	0.039	0.173	0.062	-0.045	0.102	1.000									
Mineral Rents (% of GDP)	-0.013	-0.186	-0.078	-0.169	-0.025	-0.028	-0.197	0.111	1.000								
Oil rents (% of GDP)	-0.043	-0.243	-0.075	-0.210	-0.151	0.262	0.008	-0.100	-0.094	1.000							
Globalization (Index)	0.211	0.675	0.252	0.774	0.691	-0.181	0.748	0.143	-0.175	-0.229	1.000						
Cost of starting business (% of GNI per capita)	-0.115	-0.296	-0.133	-0.385	-0.457	0.093	-0.340	-0.106	0.076	-0.002	-0.548	1.000					
Investment profile (Index)	0.195	0.473	0.265	0.641	0.604	0.190	0.620	0.148	-0.144	-0.048	0.628	-0.413	1.000				
Corruption Level (Index)	0.240	0.498	0.244	0.749	0.568	-0.012	0.777	0.164	-0.078	-0.209	0.708	-0.357	0.641	1.000			
Socioeconomic Conditions (Index)	0.239	0.543	0.295	0.755	0.640	0.064	0.789	0.169	-0.191	0.015	0.798	-0.502	0.723	0.707	1.000		
Physical distance	-0.094	-0.202	-0.104	-0.247	-0.230	-0.106	-0.243	-0.099	0.143	-0.103	-0.232	0.202	-0.242	-0.115	-0.294	1.000	
Real Effective Exchange Rate	0.002	0.024	-0.011	-0.028	-0.048	-0.038	-0.027	-0.009	0.006	-0.015	-0.039	0.055	-0.082	-0.052	-0.073	0.010	1.000

Appendix C

Table 34 : Hausman test[21]

		Coefficients		
	(b)	(B)	(b-B)	sqrt(diag(V_b-V_B))
	fe	re	Difference	Std. err.
idealpointance	-.6717363	-1.224396	.5526599	.0373655
tradeflow_comtrade_d	.1455443	.1655205	-.0199762	.0056932
LBurQuality_Imp	.7136377	-.7484354	1.462073	.2120463
GMilinPol_Imp	.1697659	-.1287663	.2985322	.0309684
AGovStab_Imp	-.2012858	-.2515578	.050272	
lgdpcap_d	1.799583	1.487395	.312188	.0252819
rta	.7584133	.8273738	-.0689605	
MinRents_Imp	-.0296685	.0148314	-.0444999	
OilRents_Imp	-.0482581	-.0428333	-.0054248	.0030891
KOFGI_Imp	.1483144	.0621128	.0862016	.0047971
entry_cost_d	-.0034181	-.0060977	.0026796	
CInvest_Imp	-.3073009	-.3725967	.0652957	
FCorrup_Imp	.3401101	.3041726	.0359375	
BSocioEco_Imp	-.0123219	-.067846	.0555241	
ldist	-7.607009	-.6513969	-6.955612	4.616561
lREER_Value	.0087146	.00452	.0041946	
b = Consistent under H0 and Ha				
B = Inconsistent under Ha, efficient under H0; obtained from xtreg.				
Test of H0: Difference in coefficients not systematic				
chi2(15) = (b-B)'[(V_b-V_B)^(-1)](b-B)				
= 300.63				
Prob > chi2 = 0.0000				
(V_b-V_B is not positive definite)				

---

[21] The p-value is below 0.001, leading to the rejection of the null hypothesis (H₀). This indicates that the fixed-effects (FE) model is preferred over the random-effects (RE) model for these data. The unobserved group-specific effects (country pair effects) are correlated with the explanatory variables, justifying the use of the FE model to ensure unbiased and consistent estimates.

Appendix C

Table 35 : List of countries

FDI Destination countries					
Afghanistan	Democratic Republic of the Congo	Hungary	Madagascar	Romania	Zambia
Angola	Republic of the Congo	India	Mexico	Russia	Zimbabwe
Albania	Colombia	Ireland	North Macedonia	Rwanda	
United Arab Emirates	Costa Rica	Iran	Mali	Saudi Arabia	
Argentina	Czech Republic	Iraq	Myanmar	Senegal	
Armenia	Denmark	Israel	Mongolia	Singapore	
Australia	Dominican Republic	Italy	Mozambique	Sierra Leone	
Austria	Algeria	Jamaica	Mauritania	El Salvador	
Azerbaijan	Ecuador	Jordan	Malawi	Slovakia	
Burundi	Egypt	Japan	Namibia	Slovenia	
Belgium	Spain	Kazakhstan	Niger	Sweden	
Benin	Finland	Kenya	Nigeria	Chad	
Burkina Faso	France	Kyrgyzstan	Nicaragua	Togo	
Bangladesh	Gabon	Cambodia	Netherlands	Thailand	
Bulgaria	United Kingdom	South Korea	Norway	Tajikistan	
Bosnia and Herzegovina	Georgia	Kuwait	Nepal	Turkmenistan	
Belarus	Ghana	Laos	New Zealand	Tunisia	
Bolivia	Guinea	Lebanon	Oman	Turkey	
Brazil	Gambia	Liberia	Panama	Tanzania	
Botswana	Guinea-Bissau	Libya	Peru	Uganda	
Central African Republic	Greece	Sri Lanka	Philippines	Ukraine	
Canada	Guatemala	Lesotho	Papua New Guinea	Uruguay	
Switzerland	Hong Kong	Lithuania	Poland	United States	
Chile	Honduras	Latvia	Portugal	Uzbekistan	
Ivory Coast	Croatia	Morocco	Paraguay	Venezuela	
Cameroon	Haiti	Moldova	Qatar	South Africa	

Figure 28 : Top 5 Recipient Sectors of Chinese FDI Stocks (2008–2019
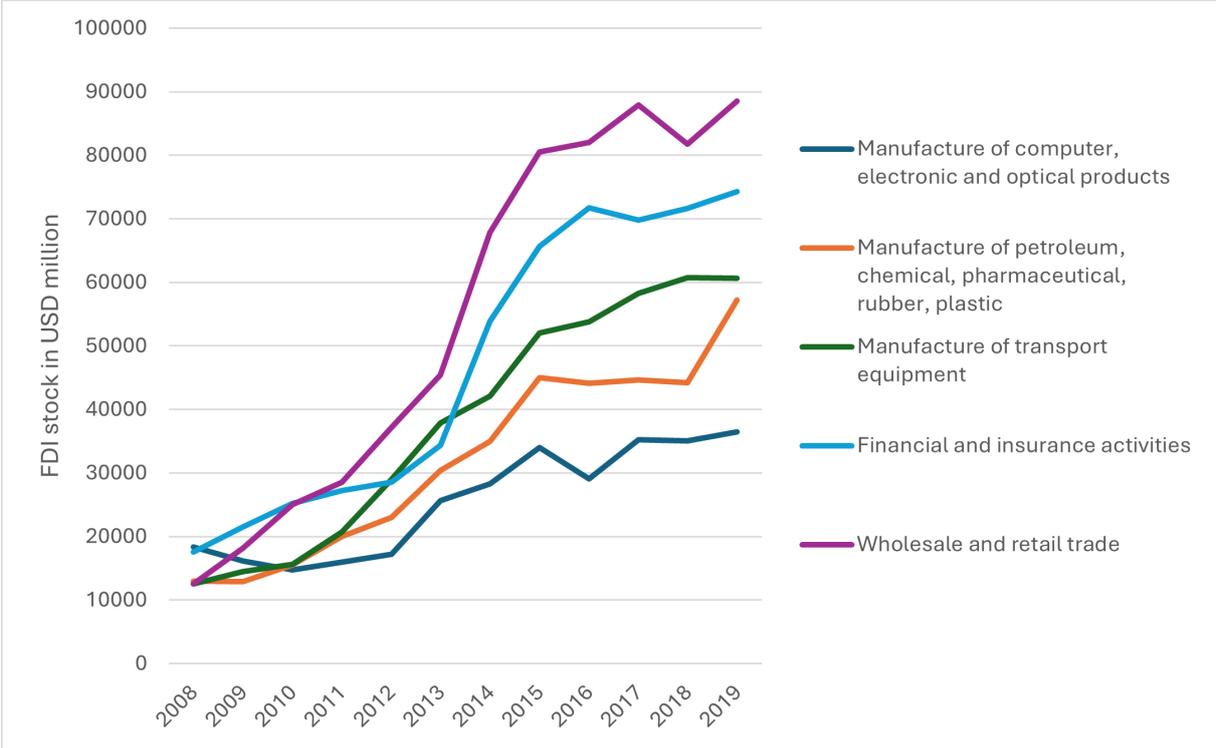
Figure 29 : Evolution of Chinese FDI Stocks by Host Region (2001–2021)

Appendix C
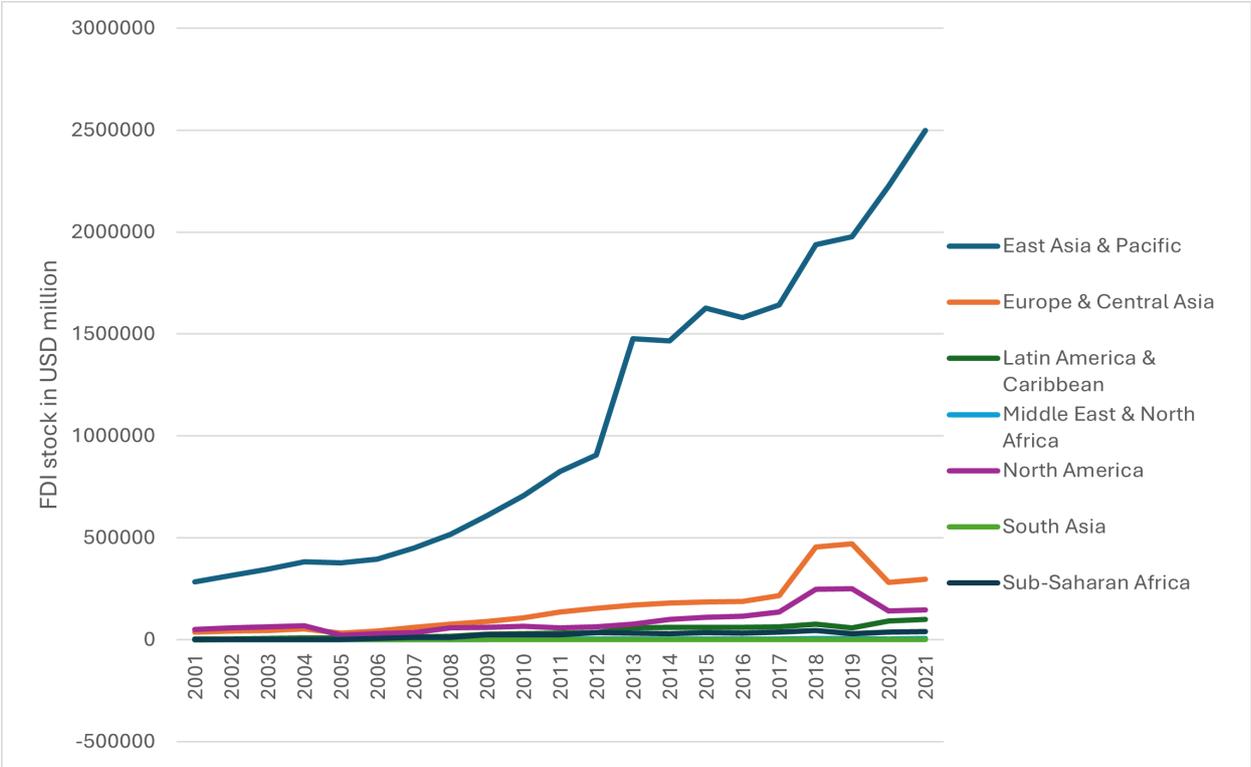
Figure 30 : Chinese FDI Stocks by Host Region (Excluding East Asia & Pacific), 2001–2021
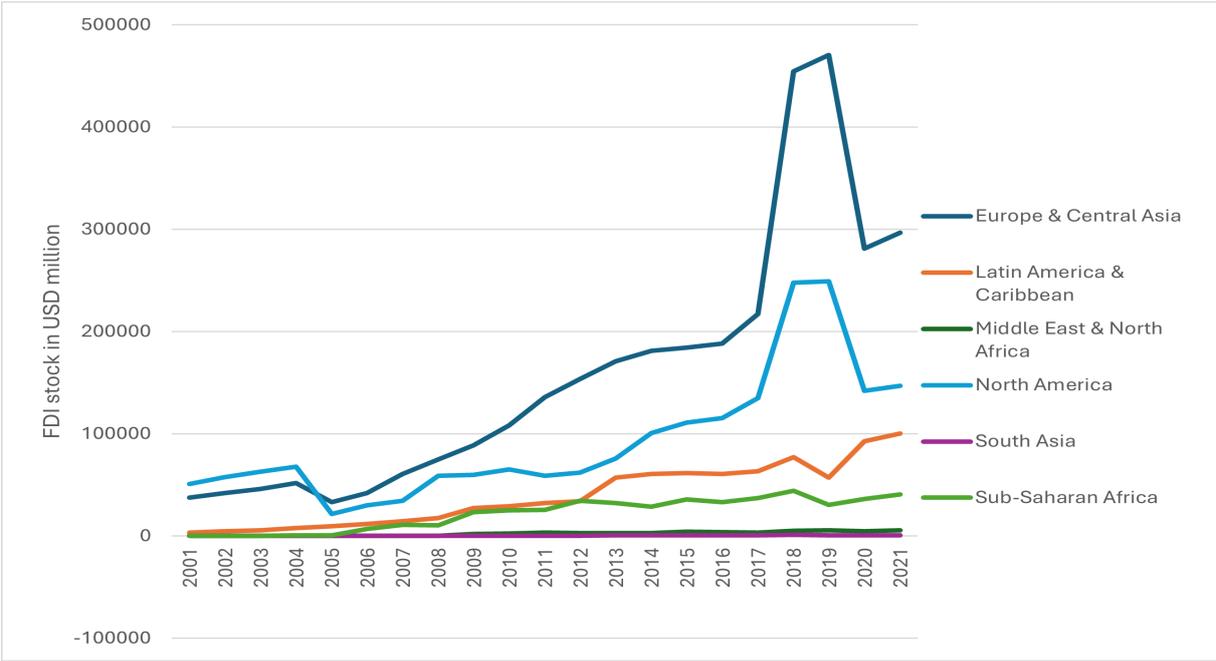

Figure 31 : Geopolitical Distance between China and African Countries in 2020: A Spatial Perspective

Appendix C

Figure 32 : Geopolitical distance between China and the countries of the world in 2020 : A global perspective
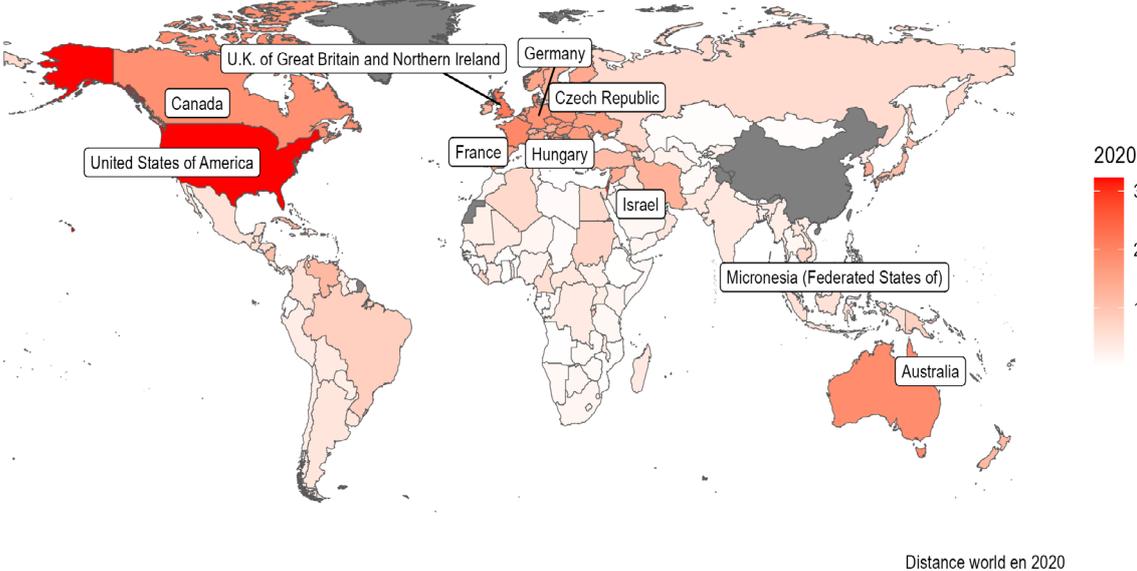
Source: Author's elaboration using UNCTAD data with R. Gray areas indicate missing data , except for China itself.

Appendix C

Figure 33 : FDI flows from China to African countries in 2020: a geographical breakdown
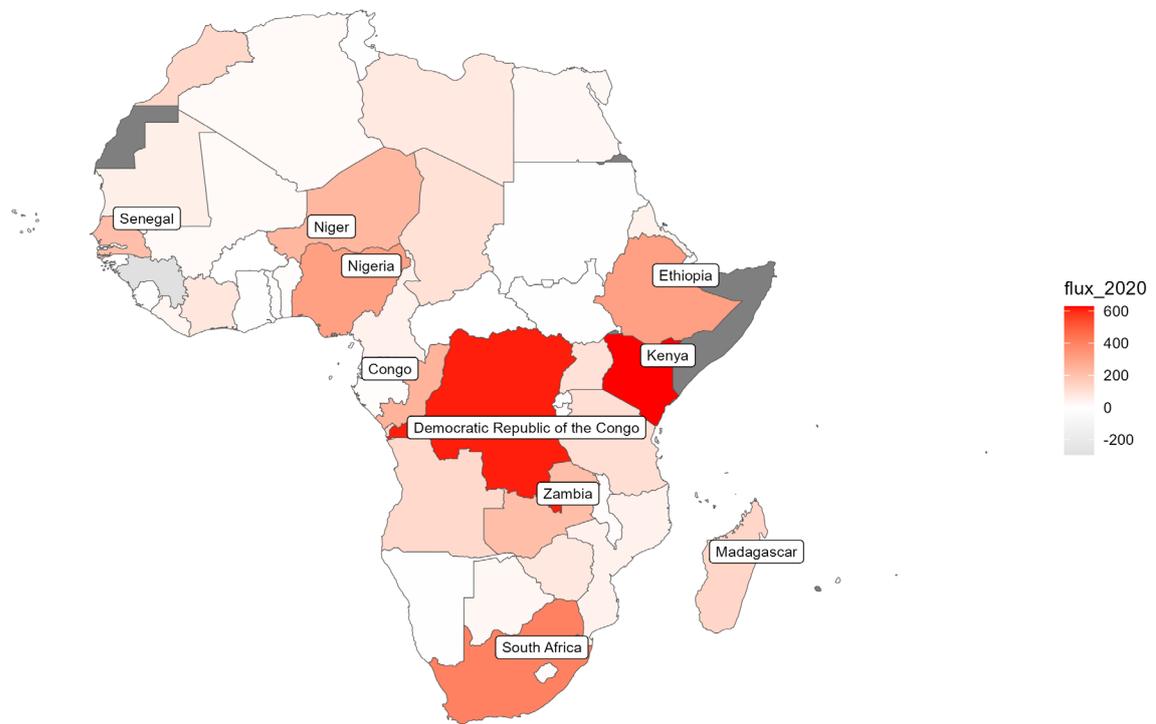
Flux en 2020 en Afrique

Source: Author's elaboration using UNCTAD data with R. Gray areas indicate missing data.

Figure 34 : China's FDI stock in Africa in 2020: a geographical perspective
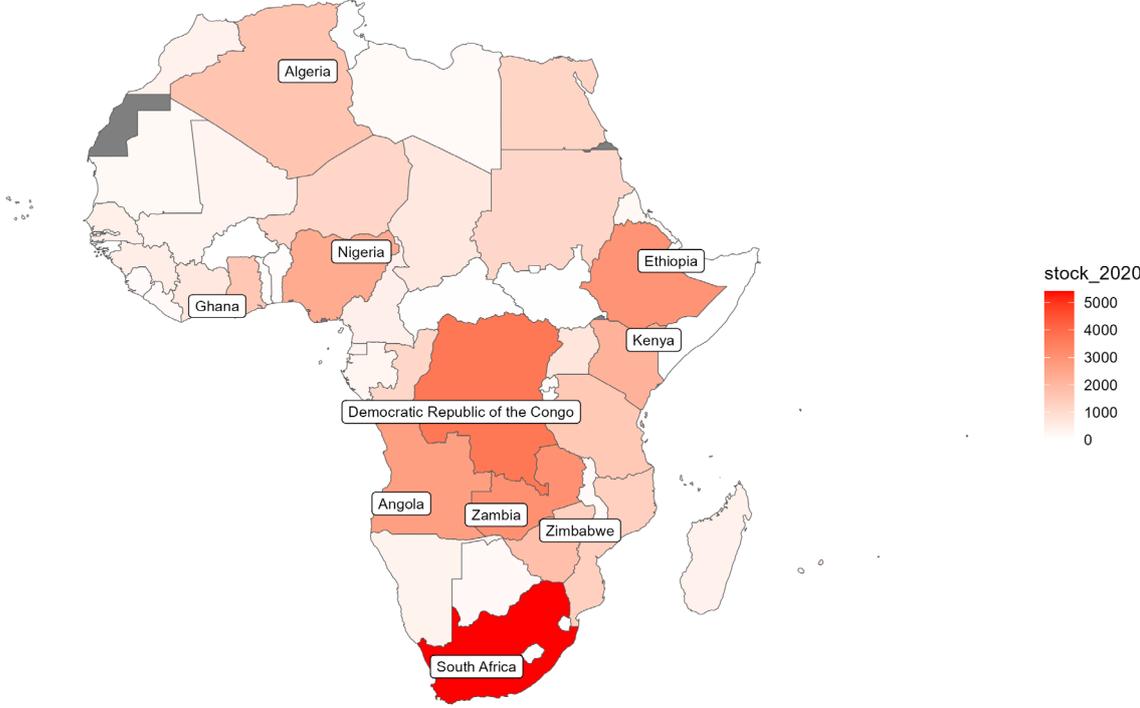
Stock en 2020 en Afrique

Source: Author's elaboration using UNCTAD data with R. Gray areas indicate missing data.

Chapter 5 : Conclusion Générale

Cette thèse s'est attachée à analyser l'influence de la distance géopolitique sur trois dimensions majeures des relations économiques internationales : le commerce bilatéral, l'APD octroyée par les pays membres du Comité d'aide au développement, et les IDE, avec un focus particulier sur les IDE en provenance de la Chine. L'objectif principal de ce travail était d'évaluer dans quelle mesure la géopolitique (appréhendée à travers la notion de distance géopolitique) peut influencer les échanges économiques internationaux, parfois de manière plus marquée que certains facteurs économiques traditionnels tels que la taille des économies ou la distance physique. En intégrant les dynamiques géopolitiques à l'analyse des relations commerciales, de l'APD et des IDE chinois, cette recherche propose une lecture renouvelée des liens entre politique internationale et économie mondiale, dans un contexte marqué par des rivalités stratégiques croissantes entre grandes puissances.

Dans le deuxième chapitre, il a été démontré que la distance géopolitique affecte négativement les flux de commerce bilatéral entre les pays. Le modèle gravitaire, enrichi par l'introduction d'une mesure de distance géopolitique basée sur l'alignement des votes aux Nations Unies, a montré que les pays qui sont politiquement alignés tendent à commercer davantage entre eux, tandis que ceux qui sont éloignés sur le plan géopolitique voient leurs échanges commerciaux diminuer, toutes choses égales par ailleurs. Ce résultat est particulièrement prononcé pour les secteurs sensibles, tels que les matières premières et les combustibles minéraux, qui sont souvent au cœur des stratégies géopolitiques. Les tensions politiques et les sanctions économiques, comme celles imposées à la Russie suite à l'annexion de la Crimée, ont montré comment les décisions géopolitiques peuvent remodeler les flux commerciaux mondiaux. De plus, la montée du protectionnisme, notamment à travers la guerre commerciale entre les États-Unis et la Chine, démontre que les conflits géopolitiques influencent de plus en plus la structure des partenariats commerciaux mondiaux.

Dans le troisème chapitre, cette thèse a exploré la manière dont les intérêts géopolitiques influencent l'allocation de l'APD par les pays du CAD. Contrairement à l'idée traditionnelle selon laquelle l'aide est distribuée en fonction des besoins des pays récipiendaires, les résultats ont montré que les pays donateurs privilégient souvent les pays qui sont politiquement alignés avec eux. L'analyse, qui distingue les différents canaux d'aide (ONG, organisations multilatérales, et institutions publiques), a révélé que les pays géopolitiquement proches des donateurs reçoivent une part disproportionnée de l'aide, notamment à travers les ONG et la société civile. Cette tendance s'explique en partie par les préoccupations sécuritaires des donateurs, qui voient dans l'APD un moyen de stabiliser des régions politiquement stratégiques. Par exemple, les relations entre les États-Unis et l'Égypte, ou l'aide de l'Union européenne aux Balkans, illustrent l'utilisation stratégique de l'aide pour renforcer des alliances et protéger des intérêts géopolitiques dans des régions clés. La période post-11 septembre et les conflits dans le Moyen-Orient ont montré une

augmentation de l'utilisation de l'aide comme un levier pour contrer les menaces terroristes ou maintenir des régimes politiquement favorables.

Le quatrième chapitre s'est penché sur les IDE chinois, en particulier dans le cadre de l'initiative des Nouvelles Routes de la Soie (Belt and Road Initiative). L'étude a montré que la Chine utilise ses IDE non seulement comme un outil de développement économique, mais aussi comme un instrument de projection de son influence géopolitique. L'analyse des flux d'IDE chinois vers 132 pays sur la période 1990-2021 a révélé que les décisions d'investissement de la Chine sont fortement influencées par des considérations géopolitiques. Les pays politiquement alignés avec la Chine, ou ceux qui occupent une position stratégique dans des corridors de transport ou des régions riches en ressources naturelles, reçoivent des flux d'IDE plus importants. Les infrastructures, notamment les ports et les voies de communication, constituent des secteurs d'investissement prioritaires pour la Chine, qui cherche à sécuriser ses approvisionnements et à renforcer son contrôle sur les routes commerciales mondiales. Par ailleurs, l'étude a montré que, contrairement aux autres grandes puissances économiques, la Chine n'hésite pas à investir dans des pays présentant un risque politique élevé, tant que ces investissements servent ses objectifs géopolitiques à long terme.

Cette thèse apporte plusieurs contributions significatives à la littérature sur les relations économiques internationales en intégrant les facteurs géopolitiques dans l'analyse des flux économiques globaux. Tout d'abord, elle propose une révision du modèle gravitaire du commerce en y intégrant la notion de distance géopolitique, montrant ainsi que les alliances politiques jouent un rôle central dans le commerce international, en particulier pour les secteurs stratégiques. Alors que la mondialisation avait été perçue comme une force qui réduit les barrières aux échanges, les résultats de cette étude soulignent que les tensions géopolitiques peuvent exacerber les obstacles au commerce entre pays.

Ensuite, cette thèse montre que l'aide publique au développement est un outil de diplomatie stratégique autant qu'un instrument de coopération internationale. Les donateurs du CAD utilisent l'APD pour renforcer leurs alliances et sécuriser leur influence géopolitique dans des régions clés. Cette approche apporte un éclairage nouveau sur les motivations des pays donateurs et ouvre la voie à des débats sur la transparence et l'efficacité de l'aide internationale, en mettant en lumière les disparités entre les objectifs affichés et les réalités géopolitiques.

Enfin, cette thèse met en évidence le rôle de la Chine en tant qu'acteur clé des IDE mondiaux, mais aussi comme puissance géopolitique. Contrairement aux approches classiques des IDE, l'analyse montre que la Chine adopte une stratégie d'investissement qui favorise les pays alignés politiquement et qui servent ses ambitions géopolitiques à long terme. La Chine utilise ses investissements pour étendre son influence, sécuriser des ressources et consolider ses relations avec les pays qui occupent une position stratégique dans le cadre de la BRI. Cette étude contribue ainsi à mieux comprendre la manière dont les IDE peuvent être utilisés non seulement pour promouvoir la croissance économique, mais aussi pour renforcer la position géopolitique d'un pays.

Les résultats de cette thèse ont des implications importantes pour les décideurs politiques, tant dans les pays donateurs que dans les pays récipiendaires. Premièrement, les politiques commerciales doivent intégrer l'impact des dynamiques géopolitiques sur les échanges bilatéraux. Alors que les sanctions et les tensions géopolitiques se multiplient, il devient essentiel pour les pays de diversifier leurs partenaires commerciaux et de concevoir des stratégies tenant compte des risques géopolitiques. La montée du protectionnisme, combinée aux rivalités entre grandes puissances, impose une approche plus stratégique des partenariats économiques, en veillant à ce que ces alliances soient les moins vulnérables possible aux chocs géopolitiques.

Deuxièmement, en ce qui concerne l'APD, il est crucial pour les donateurs de mieux équilibrer leurs objectifs géopolitiques et les besoins de développement des pays récipiendaires. La focalisation excessive sur les considérations politiques pourrait conduire à une allocation inefficace des ressources, au détriment des populations les plus vulnérables. Les récipiendaires, quant à eux, doivent être conscients des dynamiques géopolitiques sous-jacentes à l'aide qu'ils reçoivent, afin d'élaborer des stratégies de développement plus autonomes et moins dépendantes des agendas politiques des donateurs.

Enfin, pour les pays récipiendaires des IDE chinois, il est crucial de comprendre les implications à long terme de ces investissements, non seulement en termes de développement économique, mais aussi de souveraineté politique. Les IDE chinois, bien qu'ils apportent des opportunités économiques considérables, peuvent également créer une dépendance vis-à-vis de la Chine, limitant ainsi la capacité des pays à formuler des politiques indépendantes. Il est donc essentiel que les pays bénéficiaires d'IDE prennent en compte à la fois les avantages économiques et les risques politiques associés à ces flux d'investissements.

Cette thèse, bien qu'apportant des contributions importantes à l'analyse des relations économiques internationales sous l'angle de la géopolitique, comporte certaines limites qu'il convient de reconnaître. Les données mobilisées, bien qu'étendues et robustes, ne permettent pas toujours de capturer pleinement la complexité des interactions bilatérales ou des spécificités historiques et culturelles propres à chaque relation. Par exemple, certains phénomènes contextuels, tels que les rivalités régionales ou les différends historiques, peuvent échapper à l'analyse fondée sur des moyennes globales ou des indicateurs standardisés.

De plus, les modèles économétriques employés, bien qu'efficaces pour établir des relations robustes entre les variables, simplifient nécessairement la réalité. Ils ne capturent que des tendances moyennes et peuvent ne pas refléter les dynamiques spécifiques induites par des événements exogènes, comme des crises géopolitiques soudaines ou des changements majeurs dans les relations internationales. Par ailleurs, l'utilisation de mesures globales de distance géopolitique, comme l'alignement des votes à l'ONU, bien qu'innovante, pourrait être complétée par des indicateurs plus contextuels et dynamiques.

Cependant, ces limites offrent également de nombreuses perspectives pour des recherches futures. L'intégration de nouveaux indicateurs de distance géopolitique, tels que les alliances militaires, les réseaux diplomatiques ou les flux d'information, permettrait d'affiner l'analyse et d'enrichir la compréhension des dynamiques géopolitiques. De plus, l'impact des crises géopolitiques soudaines, telles que les changements de régime, les révolutions ou les conflits régionaux, sur les flux économiques, pourrait faire l'objet d'une analyse plus approfondie, en particulier pour comprendre comment les pays ajustent leurs stratégies économiques dans un contexte d'instabilité politique.

Par ailleurs, une extension de cette analyse aux pays en développement, notamment en Amérique latine et en Europe de l'Est, permettrait de tester la généralisation des résultats obtenus dans cette thèse. Ces régions, caractérisées par des dynamiques géopolitiques et économiques complexes, offrent un terrain propice pour approfondir l'étude de l'interaction entre géopolitique et relations économiques. En définitive, ces pistes de recherche pourraient non seulement compléter les travaux menés dans cette thèse, mais également contribuer à une compréhension plus globale et nuancée des relations économiques internationales.

References

Acemoglu, D., & Robinson, J. A. (2013). Why nations fail : The origins of power, prosperity, and poverty. Crown Currency.

Ahir, H., Bloom, N., & Furceri, D. (2022). The world uncertainty index. National bureau of economic research.

Ahlfeldt, G. M., Redding, S. J., Sturm, D. M., & Wolf, N. (2015). The economics of density : Evidence from the Berlin Wall. Econometrica, 83(6), 2127-2189.

Aiyar, M. S., Chen, M. J., Ebeke, C., Ebeke, M. C. H., Garcia-Saltos, M. R., Gudmundsson, T., Ilyina, M. A., Kangur, M. A., Kunaratskul, T., & Rodriguez, M. S. L. (2023). Geo-economic fragmentation and the future of multilateralism. International Monetary Fund. https://books.google.com/books?hl=fr&lr=&id=GgqoEAAAQBAJ&oi=fnd&pg=PA2&dq=Aiyar+and+al.+(2023a),+&ots=sKE1gBCPPR&sig=IWeLovxM6os-aaxC9qF1BZHVoBM

Aiyar, S., Malacrino, D., & Presbitero, A. F. (2024). Investing in friends : The role of geopolitical alignment in fdi flows. European Journal of Political Economy, 83, 102508. https://www.sciencedirect.com/science/article/pii/S0176268024000107

Alesina, A., & Dollar, D. (2000). Who gives foreign aid to whom and why? Journal of economic growth, 5, 33-63. https://idp.springer.com/authorize/casa?redirect_uri=https://link.springer.com/article/10.1023/a:1009874203400&casa_token=sWUmKAVZjgwAAAAA:e-egGuOmv-dQ0ARA4R2z1BEdACZJuM7AuDK5t9558xhnv0Y5KVqIznAVUSaQ5hTVzXs3qBklZJdSoSHWwA

Ambrocio, G., & Hasan, I. (2021). Quid pro quo? Political ties and sovereign borrowing. Journal of International Economics, 133, 103523.

Antràs, P., & De Gortari, A. (2020). On the geography of global value chains. Econometrica, 88(4), 1553-1598.

Apergis, N., & Tang, C. F. (2013). Is the energy-led growth hypothesis valid? New evidence from a sample of 85 countries. Energy economics, 38, 24-31.

References

Arezki, R., Camara, Y., van Der Ploeg, F., & Rota-Graziosi, G. (2024). Bad Samaritans in Foreign Aid : Evidence from Major Mineral Discoveries. CESifo Working Paper. https://www.econstor.eu/handle/10419/307357

Asiedu, E. (2006). Foreign Direct Investment in Africa : The Role of Natural Resources, Market Size, Government Policy, Institutions and Political Instability. The World Economy, 29(1), 63-77. https://doi.org/10.1111/j.1467-9701.2006.00758.x

Asiedu, E., & Villamil, A. P. (2000). Discount factors and thresholds : Foreign investment when enforcement is imperfect. Macroeconomic Dynamics, 4(1), 1-21. https://www.cambridge.org/core/journals/macroeconomic-dynamics/article/discount-factors-and-thresholds-foreign-investment-when-enforcement-is-imperfect/A1EDB5A4AF9F688D82021D2AA396F274

Aw, Y. T., & Tang, T. C. (2010). The determinants of inward foreign direct investment : The case of Malaysia. International Journal of Business and Society, 11(1), 59-76. https://www.monash.edu/__data/assets/pdf_file/0004/925492/the_determinants_of_inward_foreign_direct_investment_the_case_of_malaysia.pdf

Baier, S. L., & Bergstrand, J. H. (2007). Do free trade agreements actually increase members' international trade? Journal of international Economics, 71(1), 72-95. https://www.sciencedirect.com/science/article/pii/S0022199606000596

Bailey, M. A., Strezhnev, A., & Voeten, E. (2017). Estimating dynamic state preferences from United Nations voting data. Journal of Conflict Resolution, 61(2), 430-456.

Bak, D., & Moon, C. (2016). Foreign Direct Investment and Authoritarian Stability. Comparative Political Studies, 49(14), 1998-2037. https://doi.org/10.1177/0010414016655536

Balla, E., & Reinhardt, G. Y. (2008). Giving and Receiving Foreign Aid : Does Conflict Count? World Development, 36(12), 2566-2585. https://doi.org/10.1016/j.worlddev.2008.03.008

Baltagi, B. H., Egger, P., & Pfaffermayr, M. (2003). A generalized design for bilateral trade flow models. Economics letters, 80(3), 391-397.

Bao, X., Liu, Q., Qiu, L. D., & Zhu, D. (2020). The effects of bilateral attitudes on imports. The World Economy, 43(2), 371-387.

References

Barkema, H. G., Bell, J. H. J., & Pennings, J. M. (1996). FOREIGN ENTRY, CULTURAL BARRIERS,

AND LEARNING. Strategic Management Journal, 17(2), 151-166.

https://doi.org/10.1002/(sici)1097-0266(199602)17:2<151::aid-smj799>3.0.co;2-z

Bayramoglu, B., Jacques, J.-F., Nedoncelle, C., & Neumann-Noel, L. (2023). International climate aid and

trade. Journal of Environmental Economics and Management, 117, 102748.

https://www.sciencedirect.com/science/article/pii/S0095069622001012

Begu, L. S., Vasilescu, M. D., Stanila, L., & Clodnitchi, R. (2018). China-Angola investment model.

Sustainability, 10(8), 2936. https://www.mdpi.com/2071-1050/10/8/2936

Bellin, E. (2012). Reconsidering the robustness of authoritarianism in the Middle East : Lessons from the

Arab Spring. Comparative Politics, 44(2), 127-149.

https://www.ingentaconnect.com/content/cuny/cp/2012/00000044/00000002/art00002

Berger, D., Easterly, W., Nunn, N., & Satyanath, S. (2013). Commercial imperialism? Political influence

and trade during the Cold War. American Economic Review, 103(2), 863-896.

Bermeo, S. B. (2017). Aid allocation and targeted development in an increasingly connected world.

International Organization, 71(4), 735-766.

https://www.cambridge.org/core/journals/international-organization/article/aid-allocation-and-

targeted-development-in-an-increasingly-connected-

world/7478DF8E264AE5C876EDD96B86CB0E9D

Bermeo, S. B., & Leblang, D. (2015). Migration and foreign aid. International Organization, 69(3),

627-657. https://www.cambridge.org/core/journals/international-

organization/article/migration-and-foreign-aid/3ABECDC0D0EC0C885B9739EB738C85AD

Berthélemy, J. (2006). Bilateral Donors' Interest vs. Recipients' Development Motives in Aid Allocation :

Do All Donors Behave the Same? Review of Development Economics, 10(2), 179-194.

https://doi.org/10.1111/j.1467-9361.2006.00311.x

Besley, T., & Kudamatsu, M. (2006). Health and Democracy. American Economic Review, 96(2), 313-318.

https://doi.org/10.1257/000282806777212053

Bhatia, M. (2023). On the efficiency of the gold returns : An econometric exploration for India, USA and

Brazil. Resources Policy, 82, 103574.

References

Bi, Y., Ren, Z., & Bao, K. (2020). Does distance matter in foreign direct investment sub-national location choice? Evidence from China. Frontiers of Business Research in China, 14(1), 12. https://doi.org/10.1186/s11782-020-00080-8

Bliss, H., & Russett, B. (1998). Democratic Trading Partners : The Liberal Connection, 1962-1989. The Journal of Politics, 60(4), 1126-1147. https://doi.org/10.2307/2647734

Blonigen, B. A., & Piger, J. (2014). Determinants of foreign direct investment. Canadian Journal of Economics/Revue Canadienne d'économique, 47(3), 775-812. https://doi.org/10.1111/caje.12091

Boone, P. (1996). Politics and the effectiveness of foreign aid. European Economic Review, 40(2), 289-329. https://doi.org/10.1016/0014-2921(95)00127-1

Booth, D., & Golooba-Mutebi, F. (2012). Developmental patrimonialism? The case of Rwanda. African Affairs, 111(444), 379-403. https://academic.oup.com/afraf/article-abstract/111/444/379/152698

Brech, V., & Potrafke, N. (2014). Donor ideology and types of foreign aid. Journal of Comparative Economics, 42(1), 61-75. https://www.sciencedirect.com/science/article/pii/S014759671300098X

Brun, J.-F., Carrère, C., Guillaumont, P., & De Melo, J. (2005). Has distance died? Evidence from a panel gravity model. The World Bank Economic Review, 19(1), 99-120.

Buckley, P. J., Clegg, L. J., Cross, A. R., Liu, X., Voss, H., & Zheng, P. (2015). The determinants of Chinese outward foreign direct investment. In International business strategy (p. 574-600). Routledge. https://api.taylorfrancis.com/content/chapters/edit/download?identifierName=doi&identifierValue=10.4324/9781315848365-40&type=chapterpdf

Buelens, C., & Tirpák, M. (2017). Reading the Footprints : How Foreign Investors Shape Countries' Participation in Global Value Chains. Comparative Economic Studies, 59(4), 561-584. https://doi.org/10.1057/s41294-017-0036-2

Burnside, C., & Dollar, D. (2000). Aid, policies, and growth. American economic review, 90(4), 847-868. https://www.aeaweb.org/articles?id=10.1257/aer.90.4.847

References

Buzan, B. (2006). Will the 'global war on terrorism'be the new Cold War? International affairs, 82(6),

    1101-1118. https://academic.oup.com/ia/article-abstract/82/6/1101/2435018

Cairncross, F. (1997). The death of distance : How the communications revolution will change our lives.

    (No Title).

Caldara, D., & Iacoviello, M. (2022). Measuring geopolitical risk. American Economic Review, 112(4),

    1194-1225.

Campos, I., & Vines, A. (2008). Angola and China. Center for strategic and international studies.

    https://www.chathamhouse.org/sites/default/files/public/Research/Africa/angolachina_csis.pd

    f

Campos, J. E., Lien, D., & Pradhan, S. (1999). The impact of corruption on investment : Predictability

    matters. World development, 27(6), 1059-1067.

    https://www.sciencedirect.com/science/article/pii/S0305750X99000406

Carapico, S. (2013). Political aid and Arab activism : Democracy promotion, justice, and representation

    (Vol. 44). Cambridge University Press.

    https://books.google.com/books?hl=fr&lr=&id=60Q0AgAAQBAJ&oi=fnd&pg=PR9&dq=car

    apico+2013+aid&ots=AXeFTkdvtF&sig=Vmu4J4rJOg1gaCcCSsxGrYweFIo

Carey, S. C. (2007). European Aid : Human Rights Versus Bureaucratic Inertia? Journal of Peace Research,

    44(4), 447-464. https://doi.org/10.1177/0022343307078938

Carter, D. B., & Stone, R. W. (2015). Democracy and multilateralism : The case of vote buying in the UN

    General Assembly. International Organization, 69(1), 1-33.

    https://www.cambridge.org/core/journals/international-organization/article/democracy-and-

    multilateralism-the-case-of-vote-buying-in-the-un-general-

    assembly/AEBEE2ADA2E4FC421EEE6D988B7BF08C

Chakrabarti, A. (2001). The Determinants of Foreign Direct Investments : Sensitivity Analyses of

    Cross-Country Regressions. Kyklos, 54(1), 89-114. https://doi.org/10.1111/1467-6435.00142

Chauvet, L., & Guillaumont, P. (2004). Aid and growth revisited : Policy, economic vulnerability and

    political instability. Toward Pro-Poor Policies Aid, Institutions, and Globalization, 95-109.

    https://books.google.com/books?hl=fr&lr=&id=R1KBWX329uIC&oi=fnd&pg=PA95&dq=C

References

hauvet,+L.,+%26+Guillaumont,+P.+(2004).+Aid+and+growth+revisited:+policy,+economic+

vulnerability+and+political+instability.+Toward+Pro-

Poor+Policies+Aid,+Institutions,+and+Globalization,+95-

109.&ots=zwikkZRatC&sig=rAAnLtJz13T3sYjO7ZVxc6gQ5Es

Chen, K.-M., Rau, H.-H., & Lin, C.-C. (2006). THE IMPACT OF EXCHANGE RATE MOVEMENTS

ON FOREIGN DIRECT INVESTMENT : MARKET-ORIENTED VERSUS COST-

ORIENTED: IMPACT OF EXCHANGE RATE MOVEMENTS ON FDI. The Developing

Economies, 44(3), 269‑287. https://doi.org/10.1111/j.1746-1049.2006.00017.x

Chen, W., Dollar, D., & Tang, H. (2018). Why is China investing in Africa? Evidence from the firm level.

The World Bank Economic Review, 32(3), 610‑632. https://academic.oup.com/wber/article-

abstract/32/3/610/2669775

Cheung, Y., & Qian, X. (2009). EMPIRICS OF CHINA'S OUTWARD DIRECT INVESTMENT.

Pacific Economic Review, 14(3), 312‑341. https://doi.org/10.1111/j.1468-0106.2009.00451.x

Chor, D. (2023). Discussion of geoeconomic fragmentation, global value chains, and foreign direct

investment1. Geoeconomic Fragmentation The Economic Risks from a Fractured World

Economy. https://www.sipotra.it/wp-content/uploads/2024/03/Geoeconomic-Fragmentation.-

The-Economic-Risks-from-a-Fractured-World-Economy.pdf#page=146

Choudhury, R. N. (2023). China in Bangladesh : Developing Infrastructure or Deepening Influence. In R.

N. Choudhury (Éd.), Mapping Chinese Investment in South Asia (p. 65‑93). Springer Nature.

https://doi.org/10.1007/978-981-99-1385-5_4

Choudhury, S. R., Khandwe, S., & Sharma, M. (2024). Vaccine Diplomacy : Partnering Global Goods. In

R. Shaw & S. R. Choudhury (Éds.), India, Japan and Beyond : Human Security, Environment,

Development, Innovation and Resilience (p. 145‑162). Springer Nature.

https://doi.org/10.1007/978-981-97-3282-1_9

Clemens, M. A., & Postel, H. M. (2018). Deterring emigration with foreign aid : An overview of evidence

from low-income countries. Population and Development Review, 44(4), 667.

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7413619/

References

Colantone, I., & Stanig, P. (2018). The Trade Origins of Economic Nationalism : Import Competition and

    Voting Behavior in Western Europe. American Journal of Political Science, 62(4), 936-953.

    https://doi.org/10.1111/ajps.12358

Cyrus, T. L. (2012). Cultural distance and bilateral trade. Global Economy Journal, 12(4), 1850275.

Czaika, M., & Mayer, A. (2011). Refugee Movements and Aid Responsiveness of Bilateral Donors. Journal

    of Development Studies, 47(3), 455-474. https://doi.org/10.1080/00220388.2010.492855

De Mesquita, B. B., & Smith, A. (2009). A political economy of aid. International Organization, 63(2),

    309-340. https://www.cambridge.org/core/journals/international-organization/article/political-

    economy-of-aid/3C886EB47B1B8CC7657ACF6DEED0808B

Dennis Tänzler | Wilson Center. (s. d.). Consulté 17 octobre 2023, à l'adresse

    https://www.wilsoncenter.org/person/dennis-tanzler

Desai, R., & Goldberg, I. (2007). Enhancing Russia's Competitiveness and Innovative Capacity. World

    Bank.

    https://documents.worldbank.org/curated/en/962881468095050783/pdf/413370RU0Enhan1et

    itiveness01PUBLIC1.pdf

Dietrich, S. (2013). Bypass or engage? Explaining donor delivery tactics in foreign aid allocation.

    International Studies Quarterly, 57(4), 698-712. https://academic.oup.com/isq/article-

    abstract/57/4/698/1813014

dmalloy. (2022, avril 13). Transcript : US Treasury Secretary Janet Yellen on the next steps for Russia

    sanctions and « friend-shoring » supply chains. Atlantic Council.

    https://www.atlanticcouncil.org/news/transcripts/transcript-us-treasury-secretary-janet-yellen-

    on-the-next-steps-for-russia-sanctions-and-friend-shoring-supply-chains/

Dodds, K. J. (2014). Global geopolitics : A critical introduction. Routledge.

    https://www.taylorfrancis.com/books/mono/10.4324/9781315847245/global-geopolitics-klaus-

    dodds

Dreher, A., & Fuchs, A. (2015). Rogue aid? An empirical analysis of China's aid allocation. Canadian

    Journal of Economics/Revue Canadienne d'économique, 48(3), 988-1023.

    https://doi.org/10.1111/caje.12166

References

Dreher, A., Fuchs, A., Parks, B., Strange, A., & Tierney, M. J. (2022). Banking on Beijing : The Aims and Impacts of China's Overseas Development Program. Cambridge University Press.

Dreher, A., Klasen, S., Vreeland, J. R., & Werker, E. (2013). The Costs of Favoritism : Is Politically Driven Aid Less Effective? Economic Development and Cultural Change, 62(1), 157-191. https://doi.org/10.1086/671711

Dreher, A., Lang, V., & Reinsberg, B. (2024). Aid effectiveness and donor motives. World Development, 176, 106501. https://doi.org/10.1016/j.worlddev.2023.106501

Dreher, A., Lang, V., Rosendorff, B. P., & Vreeland, J. R. (2022). Bilateral or Multilateral? International Financial Flows and the Dirty-Work Hypothesis. The Journal of Politics, 84(4), 1932-1946. https://doi.org/10.1086/718356

Dreher, A., & Langlotz, S. (2020). Aid and growth : New evidence using an excludable instrument. Canadian Journal of Economics/Revue Canadienne d'économique, 53(3), 1162-1198. https://doi.org/10.1111/caje.12455

Dreher, A., Langlotz, S., & Marchesi, S. (2017). INFORMATION TRANSMISSION AND OWNERSHIP CONSOLIDATION IN AID PROGRAMS. Economic Inquiry, 55(4), 1671-1688. https://doi.org/10.1111/ecin.12450

Dreher, A., Nunnenkamp, P., & Thiele, R. (2008). Does US aid buy UN general assembly votes? A disaggregated analysis. Public choice, 136, 139-164. https://idp.springer.com/authorize/casa?redirect_uri=https://link.springer.com/article/10.1007/s11127-008-9286-x&casa_token=Ok5v-VyB9HoAAAAA:rUB3dRVuRxxjuFU-HvE4x5VFaLDJjUQhNyDB9lfuMibQ8GZKod-h2VnH6I14pZcHSNFORENKsZCni4BpGg

Dreher, A., Sturm, J.-E., & Vreeland, J. R. (2009). Development aid and international politics : Does membership on the UN Security Council influence World Bank decisions? Journal of development economics, 88(1), 1-18. https://www.sciencedirect.com/science/article/pii/S0304387808000187

Duanmu, J.-L., & Guney, Y. (2009). A panel data analysis of locational determinants of Chinese and Indian outward foreign direct investment. Journal of Asia business studies, 3(2), 1-15. https://www.emerald.com/insight/content/doi/10.1108/15587890980001512/full/html

References

Easterly, W., & Levine, R. (2003). Tropics, germs, and crops : How endowments influence economic development. Journal of monetary economics, 50(1), 3-39. https://www.sciencedirect.com/science/article/pii/S0304393202002003

Egger, P. (2000). A note on the proper econometric specification of the gravity equation. Economics Letters, 66(1), 25-31.

ElGanainy, A. A., Hakobyan, S., Liu, F., Weisfeld, H., Abbas, S. A., Allard, C., Balima, H. W., Bteish, C., Giri, R., & Kanda, D. S. (2023). Trade Integration in Africa : Unleashing the Continent's Potential in a Changing World. Departmental Papers, 2023(003).

Fan, D., Zhang, Y., Huang, X., & Su, Y. (2023). Varieties of institutional systems, the belt-road initiative, and the patterned investment flows. International Business Review, 32(4), 102123. https://www.sciencedirect.com/science/article/pii/S0969593123000239

Fang, T., Miao, D., Su, Z., & Yin, L. (2023). Uncertainty-driven oil volatility risk premium and international stock market volatility forecasting. Journal of Forecasting, 42(4), 872-904.

Fleck, R. K., & Kilby, C. (2010). Changing aid regimes? U.S. foreign aid from the Cold War to the War on Terror. Journal of Development Economics, 91(2), 185-197. https://doi.org/10.1016/j.jdeveco.2009.09.011

Flint, C. (2021). Introduction to geopolitics. Routledge. https://www.taylorfrancis.com/books/mono/10.4324/9781003138549/introduction-geopolitics-colin-flint

Fuchs, A., & Klann, N.-H. (2013). Emergency Aid 2.0. Beiträge zur Jahrestagung des Vereins für Socialpolitik. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2519635

Gastanaga, V. M., Nugent, J. B., & Pashamova, B. (1998). Host country reforms and FDI inflows : How much difference do they make? World development, 26(7), 1299-1314. https://www.sciencedirect.com/science/article/pii/S0305750X98000497

Glaister, K. W., Driffield, N., & Lin, Y. (2020). Foreign Direct Investment to Africa : Is There a Colonial Legacy? Management International Review, 60(3), 315-349. https://doi.org/10.1007/s11575-020-00415-w

References

Gonzalez-Vicente, R. (2012). Mapping Chinese mining investment in Latin America : Politics or market?
The China Quarterly, 209, 35-58. https://www.cambridge.org/core/journals/china-
quarterly/article/mapping-chinese-mining-investment-in-latin-america-politics-or-
market/6351C4CB7059AC13AFEA2AD98D308D39

Hasson, J. A. (1964). Shaping the world economy : Suggestions for an international economic policy.
JSTOR.

Hinz, J. (2023). The ties that bind : Geopolitical motivations for economic integration. Review of World
Economics, 159(1), 51-100. https://doi.org/10.1007/s10290-022-00461-6

Ho, C. J. (2018). South Korea's strategic approach to China (or lack of it). Joint US-Korea academic
studies, 29, 71-90.

Hoeffler, A., & Outram, V. (2011). Need, Merit, or Self-Interest—What Determines the Allocation of
Aid? Review of Development Economics, 15(2), 237-250. https://doi.org/10.1111/j.1467-
9361.2011.00605.x

Hoekman, B. M., Mavroidis, P. C., & Nelson, D. R. (2023). Geopolitical competition, globalisation and
WTO reform. The World Economy, 46(5), 1163-1188.

Hook, S. W. (2015). US foreign policy : The paradox of world power. Cq Press.
https://books.google.com/books?hl=fr&lr=&id=7JsmCwAAQBAJ&oi=fnd&pg=PP1&dq=Ho
ok,+S.+W.+(2008).+US+Foreign+Policy:+The+Paradox+of+World+Power.+CQ+Press.&ots
=4Y0jyqmFxH&sig=COP7UBf28b-JjnLpaVMuRDvjaLs

Huang, Y. (2016). Understanding China's Belt & Road Initiative : Motivation, framework and assessment.
China Economic Review, 40, 314-321. https://doi.org/10.1016/j.chieco.2016.07.007

Hurley, J., Morris, S., & Portelance, G. (2019). Examining the debt implications of the Belt and Road
Initiative from a policy perspective. Journal of Infrastructure, Policy and Development, 3(1),
139-175. https://systems.enpress-publisher.com/index.php/jipd/article/view/1123

Isard, W., & Peck, M. J. (1954). Location theory and international and interregional trade theory. The
Quarterly Journal of Economics, 68(1), 97-114.

Jakubik, A., & Ruta, M. (2023). Trading with Friends in Uncertain Times. International Monetary Fund.

References

Jensen, N. M. (2003). Democratic governance and multinational corporations : Political regimes and
inflows of foreign direct investment. International organization, 57(3), 587-616.
https://www.cambridge.org/core/journals/international-organization/article/democratic-
governance-and-multinational-corporations-political-regimes-and-inflows-of-foreign-direct-
investment/246025D12F8982BCC871F6398EB57720

Jia, S., Yang, L., & Zhou, F. (2022). Geopolitical risk and corporate innovation : Evidence from China.
Journal of Multinational Financial Management, 66, 100772.
https://www.sciencedirect.com/science/article/pii/S1042444X22000433?casa_token=sdRKN7
O67gQAAAAA:2CuDALBAE40xIkqiex0G2OTlxd8TwVSal_bIG2nuYcuSIGs9DqbYU0gFslI1k
3zkgR-ZG9VlWDg

Kim, E., & Cha, V. (2016). Between a rock and a hard place : South Korea's strategic dilemmas with China
and the United States. Asia Policy, 21, 101-122.

Kleinman, B., Liu, E., & Redding, S. J. (2020). International friends and enemies. National Bureau of
Economic Research.

Knack, S. (2001). Aid Dependence and the Quality of Governance : Cross-Country Empirical Tests.
Southern Economic Journal, 68(2), 310-329. https://doi.org/10.1002/j.2325-
8012.2001.tb00421.x

Koenker, R., & Bassett Jr, G. (1978). Regression quantiles. Econometrica: journal of the Econometric
Society, 33-50. https://www.jstor.org/stable/1913643

Kogut, B., & Singh, H. (1988). The Effect of National Culture on the Choice of Entry Mode. Journal of
International Business Studies, 19(3), 411-432. https://doi.org/10.1057/palgrave.jibs.8490394

Kolstad, I., & Wiig, A. (2012). What determines Chinese outward FDI? Journal of world business, 47(1),
26-34. https://www.sciencedirect.com/science/article/pii/S109095161000074X

Krane, J. (2022). The geopolitics of FDI : Can weak states deter hegemons using foreign investment?
Resources Policy, 75, 102440.
https://www.sciencedirect.com/science/article/pii/S0301420721004499?casa_token=G5y0j1d5s
iAAAAAA:iEFyDlFy4thXflKr3ToeXj2uta6Vs3ZRk1zCwdb1518wmOAYjoQH2F5wuJXmGZO
E8gIKzauocdA

References

Kuziemko, I., & Werker, E. (2006). How Much Is a Seat on the Security Council Worth? Foreign Aid and

Bribery at the United Nations. Journal of Political Economy, 114(5), 905-930.

https://doi.org/10.1086/507155

Kwan, C. H. (2020). The China–US Trade War : Deep-Rooted Causes, Shifting Focus and Uncertain

Prospects. Asian Economic Policy Review, 15(1), 55-72. https://doi.org/10.1111/aepr.12284

Lebovic, J. H., & Voeten, E. (2009). The Cost of Shame : International Organizations and Foreign Aid in

the Punishing of Human Rights Violators. Journal of Peace Research, 46(1), 79-97.

https://doi.org/10.1177/0022343308098405

Li, F., Yang, C., Li, Z., & Failler, P. (2021). Does geopolitics have an impact on energy trade? Empirical

research on emerging countries. Sustainability, 13(9), 5199.

Li, Q., & Resnick, A. (2003). Reversal of fortunes : Democratic institutions and foreign direct investment

inflows to developing countries. International organization, 57(1), 175-211.

https://www.cambridge.org/core/journals/international-organization/article/reversal-of-

fortunes-democratic-institutions-and-foreign-direct-investment-inflows-to-developing-

countries/92316DFB2BC9DE4D88409E8CF0835310

Li, Y., & Zahra, S. A. (2012). Formal institutions, culture, and venture capital activity : A cross-country

analysis. Journal of business venturing, 27(1), 95-111.

Long, A. G. (2003). Defense Pacts and International Trade. Journal of Peace Research, 40(5), 537-552.

https://doi.org/10.1177/00223433030405003

Luo, Y., & Van Assche, A. (2023). The rise of techno-geopolitical uncertainty : Implications of the United

States CHIPS and Science Act. Journal of International Business Studies, 54(8), 1423-1440.

https://doi.org/10.1057/s41267-023-00620-3

Machiavelli, N. (1993). The prince (1513). Hertfordshire: Wordsworth Editions.

http://www.christophergennari.com/uploads/2/3/9/9/2399857/the_prince.pdf

Mavrotas, G. (2010). Foreign aid for development : Issues, challenges, and the new agenda. OUP Oxford.

https://books.google.com/books?hl=fr&lr=&id=jnaKs03b0ZQC&oi=fnd&pg=PR11&dq=(Ma

vrotas,+2010+oda&ots=iceelTlr00&sig=bf_HBMYwqDKmjOIVu1ahQ0-g4gQ

References

McKinley, R. D., & Little, R. (1979). The US Aid Relationship : A Test of the Recipient Need and the Donor Interest Models. Political Studies, 27(2), 236‑250. https://doi.org/10.1111/j.1467-9248.1979.tb01201.x

Meyer, P. (2019). U.S. Strategy for Engagement in Central America : Policy Issues for Congress.

Milestones : 1969–1976—Office of the Historian. (s. d.). Consulté 19 octobre 2023, à l'adresse https://history.state.gov/milestones/1969-1976/oil-embargo

Moran, T., Görg, H., Serič, A., & Krieger-Boden, C. (2018). Attracting FDI in middle-skilled supply chains. Economics, 12(1), 20180026. https://doi.org/10.5018/economics-ejournal.ja.2018-26

Morck, R., Yeung, B., & Zhao, M. (2008). Perspectives on China's outward foreign direct investment. Journal of International Business Studies, 39(3), 337‑350. https://doi.org/10.1057/palgrave.jibs.8400366

Morgenthau, H. (1948). The Struggle for Power and Peace. Alfred Kopf. http://sca.district70.org/ourpages/auto/2014/4/24/50263602/Morgenthau_Politics%20Among%20Nations.pdf

Nadzharov, A. M., & Entina, E. G. (2023). Franco-Russian Great Power Rivalry in the Sahara-Sahel Region. Russia in Global Affairs, 21(3 (83)), 181‑204. https://cyberleninka.ru/article/n/franco-russian-great-power-rivalry-in-the-sahara-sahel-region

Neumayer, E. (2003a). Do Human Rights Matter in Bilateral Aid Allocation? A Quantitative Analysis of 21 Donor Countries*. Social Science Quarterly, 84(3), 650‑666. https://doi.org/10.1111/1540-6237.8403010

Neumayer, E. (2003b). The Pattern of Aid Giving : The Impact of Good Governance on Development Assistance. Routledge. https://doi.org/10.4324/9780203986837

North, D. C. (1990). Institutions, institutional change and economic performance (Vol. 332). Cambridge university press. https://books.google.com/books?hl=fr&lr=&id=oFnWbTqgNPYC&oi=fnd&pg=PA10&dq=Institutions,+Institutional+Change+and+Economic+Performance+North&ots=s-jvR9EhR1&sig=VxKWxocMaFpE4b18S2eoHzmak_U

References

Nye, J. S. (1990). Soft power. Foreign policy, 80, 153-171.

> https://www.jstor.org/stable/1148580?casa_token=OftI1RQkntYAAAAA:UYxXJL_VdxtN1E1
> BiLZ218ZGMjPk81sixn6nEZ1Ydyodr4Vvuw2DzlxaLvUMa3VEwUXfIT5Kn0913jcq40w4bcIsn
> 07ocJ6xLw1Ve5-X8jDZHEaWUGFR

Nye Jr, J. S. (2003). The paradox of American power : Why the world's only superpower can't go it alone.

> Oxford University Press. https://books.google.fr/books?hl=fr&lr=&id=PwxcT-
> kBTmcC&oi=fnd&pg=PR7&dq=Nye,+Joseph+S.+(2002)+The+Paradox+of+American+Powe
> r:+Why+the+World%E2%80%99s+Only+Superpower+Can%E2%80%99t+Go+It+Alone.+N
> ew+York:+Oxford+University+Press&ots=s8clqMetC0&sig=SCbkeSD8jICdM1V2ytEboqjb49
> M

Ou-Yang, R., & Kim, Y. (2022). Geopolitics of Chinese Outward FDI and Its Implications for Asia-

> Pacific Middle Powers. In The Strategic Options of Middle Powers in the Asia-Pacific (p. 57-82).
> Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9781003156314-
> 5/geopolitics-chinese-outward-fdi-implications-asia-pacific-middle-powers-ray-ou-yang-yooneui-
> kim

Poppo, L., Zhou, K. Z., & Li, J. J. (2016). When can you trust "trust"? Calculative trust, relational trust,

> and supplier performance. Strategic management journal, 37(4), 724-741.

Pöyhönen, P. (1963). A tentative model for the volume of trade between countries. Weltwirtschaftliches

> archiv, 93-100.

Pozuelo, J., Slipowitz, A., & Vuletin, G. (2016). Democracy does not cause growth : The importance of

> endogeneity arguments. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2956693

Renard, M.-F. (s. d.). La Chine dans l'économie mondiale. *http://journals.openedition.org/lectures*. Consulté 3

> avril 2025, à l'adresse https://journals.openedition.org/lectures/51163

Renard, M.-F. (2018). V. La stratégie internationale de la Chine. *Repères*, 87-110.

Robst, J., Polachek, S., & Chang, Y.-C. (2007). Geographic Proximity, Trade, and International

> Conflict/Cooperation. Conflict Management and Peace Science, 24(1), 1-24.
> https://doi.org/10.1080/07388940600837680

References

Rodrik, D. (2018). New technologies, global value chains, and developing economies. National Bureau of Economic Research. https://www.nber.org/papers/w25164

Ross, M. L. (2012). The Oil Curse : How Petroleum Wealth Shapes the Development of Nations (STU-Student edition). Princeton University Press. https://www.jstor.org/stable/j.ctt7s3wz

Santiso, C. (2001). Good governance and aid effectiveness : The World Bank and conditionality. The Georgetown public policy review, 7(1), 1-22. https://www.researchgate.net/profile/Carlos-Santiso/publication/228959367_Good_Governance_and_Aid_Effectiveness_The_World_Bank_and_Conditionality/links/0f31753c34f7b24888000000/Good-Governance-and-Aid-Effectiveness-The-World-Bank-and-Conditionality.pdf

Sethi, D., Guisinger, S. E., Phelan, S. E., & Berg, D. M. (2003). Trends in foreign direct investment flows : A theoretical and empirical analysis. Journal of International Business Studies, 34(4), 315-326. https://doi.org/10.1057/palgrave.jibs.8400034

Shambaugh, D. (2000). Sino-American strategic relations : From partners to competitors. Survival, 42(1), 97-115. https://doi.org/10.1080/713660152

Silva, J. S., & Tenreyro, S. (2006). The log of gravity. The Review of Economics and statistics, 88(4), 641-658.

Svensson, J. (1999). Aid, Growth and Democracy. Economics & Politics, 11(3), 275-297. https://doi.org/10.1111/1468-0343.00062

Tang, Y., & Wezel, F. C. (2015). Up to standard? : Market positioning and performance of Hong Kong films, 1975–1997. Journal of Business Venturing, 30(3), 452-466.

Thiele, R., Nunnenkamp, P., & Dreher, A. (2007a). Do Donors Target Aid in Line with the Millennium Development Goals? A Sector Perspective of Aid Allocation. Review of World Economics, 143(4), 596-630. https://doi.org/10.1007/s10290-007-0124-x

Thiele, R., Nunnenkamp, P., & Dreher, A. (2007b). Do donors target aid in line with the Millennium Development Goals? A sector perspective of aid allocation. Review of World Economics, 143, 596-630. https://idp.springer.com/authorize/casa?redirect_uri=https://link.springer.com/article/10.1007/s10290-007-0124-

References

x&casa_token=fMOwSwpDPLUAAAAA:9J7RnTjam0AVuASLwtwY7W66Lqnm5wiDkYKZW
F9C3rvyktMQ1z-USZh472uzC8r1aooV7M_O9oCfB242yQ

Tran, H. (2022). Our guide to friend-shoring : Sectors to watch. Atlantic Council, 27.

Turhan, Y. (2024). Turkish Humanitarian Assistance During the COVID-19 Pandemic : Focus on Africa.
Journal of Balkan and Near Eastern Studies, 26(3), 327-345.
https://doi.org/10.1080/19448953.2023.2236512

Ullah, I., & Khan, M. A. (2017). Institutional quality and foreign direct investment inflows : Evidence
from Asian countries. Journal of Economic Studies, 44(6), 1030-1050.
https://www.emerald.com/insight/content/doi/10.1108/JES-10-2016-0215/full/html

Umana Dajud, C. (2013). Political Proximity and International Trade. Economics & Politics, 25(3),
283-312. https://doi.org/10.1111/ecpo.12013

Varas, A., Varadarajan, R., Goodrich, J., & Yinug, F. (2021). Strengthening the global semiconductor
supply chain in an uncertain era. Boston Consulting Group (BCG) and Semiconductor Industry
Association (SIA ….

Voeten, E., Strezhnev, A., & Bailey, M. (2023). United Nations General Assembly Voting Data (Version
31) [Jeu de données]. Harvard Dataverse. https://doi.org/10.7910/DVN/LEJUQZ

Waltz Kenneth, N. (1979). Theory of international politics/Kenneth N. Waltz.–Michigan. Addison-
Wesley Pub. Co.

Wei, S.-J. (2000). How taxing is corruption on international investors? Review of economics and statistics,
82(1), 1-11. https://direct.mit.edu/rest/article-abstract/82/1/1/57205

Weiler, F., Klöck, C., & Dornan, M. (2018). Vulnerability, good governance, or donor interests? The
allocation of aid for climate change adaptation. World Development, 104, 65-77.
https://www.sciencedirect.com/science/article/pii/S0305750X17303625?casa_token=WuXWwv
_bel0AAAAA:LNsv_JA4pa2tvbA_hAi5CWWAWKRPQPrAZnM2mVe3_zEHzsUZgZ3MwVP1
exLwPFNBw2KDVSmxqIc

Winters, M. S., & Martinez, G. (2015). The Role of Governance in Determining Foreign Aid Flow
Composition. World Development, 66, 516-531. https://doi.org/10.1016/j.worlddev.2014.09.020

References

Wooldridge, J. M. (2002). Econometric analysis of cross section and panel data MIT press. Cambridge, ma, 108(2), 245-254.

Wrobel, R. M. (2019). Chinese Geopolitics in Southeast Asia : A New Pattern of Economic Power within ASEAN? Asiatische Studien - Études Asiatiques, 73(1), 149-191. https://doi.org/10.1515/asia-2017-0049

Xie, Y., Yu, X., Yu, Z., & Zhou, Y. (2024). Spatial outward FDI : Evidence from China's multinational firms. Review of International Economics, 32(2), 574-603. https://doi.org/10.1111/roie.12698

Younas, J. (2008a). Motivation for bilateral aid allocation : Altruism or trade benefits. European journal of political economy, 24(3), 661-674. https://www.sciencedirect.com/science/article/pii/S0176268008000426

Younas, J. (2008b). Motivation for bilateral aid allocation : Altruism or trade benefits. European Journal of Political Economy, 24(3), 661-674. https://doi.org/10.1016/j.ejpoleco.2008.05.003

Yu, H. (2020). Motivation behind China's 'one belt, one road'initiatives and establishment of the Asian infrastructure investment bank. In China's New Global Strategy (p. 3-18). Routledge. https://www.taylorfrancis.com/chapters/edit/10.4324/9780429317002-2/motivation-behind-china-one-belt-one-road-initiatives-establishment-asian-infrastructure-investment-bank-hong-yu

Zhou, K. Z., & Li, C. B. (2012). How knowledge affects radical innovation : Knowledge base, market knowledge acquisition, and internal knowledge sharing. Strategic management journal, 33(9), 1090-1102.

Zhou, M. (2011). Intensification of geo-cultural homophily in global trade : Evidence from the gravity model. Social Science Research, 40(1), 193-209.

Zreik, M. (2020). The Dimensions of the US-China Trade War. Open Political Science, 3(1), 47-55. https://doi.org/10.1515/openps-2020-0004