**Impacts of visits by heads of states on China's merchandise imports
from members countries of the Belt and Road Initiative**

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Summary

Since 1990s, economic diplomacy has been a more attentive and important topic in global economy studies. Among other instruments, visits performed by heads of states have been studied as one of main indicators for economic diplomacy. Papers by Nitsch (2007), Zhang et al. (2014) show that visits performed by heads of states do matter in economic relations with other countries under scenarios of advanced and emerging economies.

Taking into account the "number of visits by heads of states a year" at state level and non-state level as instruments for economic diplomacy, the research paper employs bilateral gravity model to examine the relationship between the instruments and China's merchandise import under the Belt and Road Initiative.

The research paper's findings are from 2013 to 2018, "one general visit by heads of states a year" could tentatively increase China's merchandise imports from 5.6 per cent to 20.7 per cent. "One state-level visit by heads of states a year" could increase the BRI's countries' merchandise export to China an amount of from 6.4 per cent to 32.9 per cent. Similarly, "one state-level visit by the BRI heads of states a year" could increase China's merchandise imports from the BRI's partners an amount of around 39 per cent. Surprisingly, the research paper finds no relations between "one state-level visit by Chinese heads of states a year" and China's merchandise imports during the research period and scope. Those findings are well in line with the findings of Nitsch (2007), Head and Ries (2009), Fuchs (2016).

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Chapter 1: Introduction

1.1 Contextual background

Since the 2007 – 2009 global financial crisis, the world economy has witnessed remarkable changes with the emerging role of China as an important player in global trade system. The emergence of China has become especially clear since the current Chinese President took office in 2013. He initiated and increasingly invested many state resources in the Belt and Road Initiative. The Belt and Road Initiative (hearafter, the BRI) was designed with the ambition to ensure China's economic growth in the 21st century and to counterbalance with the United States' "pivot to Asia" policies.

Economically and politically, the initiative requires a new set of China's diplomatic philosophies of which one of the targets is to facilitate trade between China and the world (Habova, 2015). In other words, the whole systems of Chinese diplomacy will be put into a more active position to expand their core values of harmony and win – win approaches. Since then, there have been a more active diplomatic activities rotating around the BRI, including the visits by Chinese heads of state and its partners at state level and non-state level.

This approach of Chinese government is well in line with current academical development. Since the East Asia financial crisis, economists' understanding about the role of government in economic development has changed gradually, from the Washington Consensus towards the so-called "Post Washington Consensus". The Washington Consensus minimizes the role of governments and governments' interventions into economy. On the contrary, the so-called "Post Washington Consensus" highlights the role of government as a "complement to market", especially in fulfilling the key goals of trade liberalization set by the Washington Consensus. The empirical evidence from East Asia Financial crisis proved the fact that government could do more by responding to market failures, especially lack of information among markets involved (Stiglitz, 1998).

One of the useful means for a government to deal with market failures is bettering its understanding on oversea markets' demands and development via its diplomacy channels. A given economy could benefit from its diplomacy systems via economic information, cheaper export promotion, better access to supply market, and more efficient problem solving (Kostecki and Naray, 2007). It is also noted that the world economy has become more and more uncertain. According to Yakop and van Bergeijk (2011), lack of trust is one of new intangible trade barriers which are now understudied by academies. A report by Ahir et al. (2018) shows that global uncertainty index since 2012 is well above the average rate of previous 1996 – 2010; and the uncertainty level is more serious in low income and developing countries than that of the advance countries. Especially, the average uncertainty index for groups of advanced economies and emerging markets are larger for years of negative growths. In other words, the world economy is going into a more difficult phase than in the past which can be identified as a new phase of deglobalization as pointed out by many recent studies.

Those scenarios reveal a quite pessimistic future for those countries which have been mainly thrived on export-oriented economies, specifically. These scenarios can negatively impact at first the growth and development targets in low income and developing countries in particular and the Global South in general. At the same time, if the uncertainty, and possible lack of information and trust in those regions cannot be solved, foreign investors will opt for safer investments in the world. Then, the situations will be severely deteriorated.

As a result, a well - organized diplomatic strategy can yield benefits for developing countries and emerging economies, and the world as a whole. The economic diplomacy, especially the commitments by head of states can help built trust among countries and pave

a good way for clearing barriers to trade and economic exchange. Those kinds of strategy must have been built based on well fundamental theoretical backgrounds and empirical evidences with a full consideration of countries (economies)'s heterogeneity.

1.2 Research problem statement

In the context of China, economic diplomacy is identified to have impact on economic exchange between China and its partners because economic diplomacy can help to access better information, to overcome informal economic barrier and increase trust between China and its partners (Zhang et al., 2014; Fuchs, 2016). Those findings are in consistency with previous studies on the general impact of economic diplomacy toward trade and economic exchange between economies. However, to the best of my knowledge, there has no specific researches on the impact of visits by heads of state on bilateral trade between China and other countries in general and within a context of the BRI in particular.

As being the second largest economy in global economy system and a far-reaching coverage of the BRI economically and politically, it is a necessitate for researchers to better understand about the BRI and its possibly related aspect to developments. It is also important to note that the BRI was officially launched under the current Chinese President Xi's first term.

As a result of aforementioned arguments, the research paper would examine the relationship between China's merchandise imports from countries and the visits by heads of states in the BRI during 2013 – 2018.

1.3 Research question

The research paper would examine the overall question of how a general visit a year can influence China's merchandise imports from countries under the BRI?

Then, there are also sub-questions which the research paper aims to find the answers for as follows:

(1) What is the influence of "one **visit a year by heads of states**" on China's merchandise imports under the BRI from 2013 – 2018?

(2) What is the difference in influence of "one **state-level** visit a year by heads of states" and "one **non-state level** visit a year by heads of states" on China's merchandised imports under the BRI from 2013 – 2018?

(3) What is the difference in influence of "one state-level visit a year by **Chinese** heads of states" and "one non-state level visit a year by **Chinese** heads of states" on China's merchandised imports under the BRI from 2013 – 2018?

(4) What is the difference in influence of "one state-level visit a year by **the BRI** heads of states" and "one non-state level visit a year by **the BRI** heads of states" on China's merchandised imports under the BRI from 2013 – 2018?

(5) What is the difference in influence of "one state-level visit a year by **Chinese** heads of states" and "one state level visit a year by **the BRI** heads of states" on China's merchandised imports under the BRI from 2013 – 2018?

(6) What is the difference in influence of "one non- state level visit a year by **the Chinese** heads of states" and "one non-state level visit a year by **the BRI** heads of states" on China's merchandised imports under the BRI from 2013 – 2018?

1.4 Methodological approach

Methodologically, since its first introduction in 1960s, the gravity model has been more and more widely used in studying macro-economic analysis due to its flexibility. Hence, economists have managed to use gravity model to analyze the impact of economic diplomacy on economic variables, including trade, outflows of foreign direct investment, etc. Consequently, there are more adaptive gravity model versions to fit the empirical data of different observations of research.

Furthermore, the thesis paper employs bilateral gravity model of trade instead of multilateral model. It is mainly due to the fact that there is a limited exchange between the host countries and the visitors at multilateral summit meetings or at international organization (Nitsch, 2018). Also, difficulties in collecting data related to multiple diplomatic activities in my sample is another important reason.

1.5 Limitations of the research paper

Initiated by the current Chinese President at his first presidency in 2013, the BRI reflects the central role of China. Motivated by this reality, the research paper will only examine the impacts of bilateral diplomatic relations between China and the BRI countries on China's merchandise imports from the BRI countries, respectively. With these approaches, the research paper cannot take into account possibly impacts of multilaterally diplomatic relations among the BRI countries on China's merchandise imports. Those impacts on China's merchandise exports will not be studied in this work.

Additionally, there is no consensus on the officially exact number of the BRI members. To solve this issue, the research paper identifies observed countries based on information available on the official website of *The Hongkong Trade Development Council at* https://home.hktdc.com with a close reference to the official web site of Foreign Ministry of China. Nevertheless, these pickings could have possibly impacts on the finding results.

Furthermore, the research paper does not deal with the cultural and institutional heterogeneity which could have impacts on trade. Also, due to the short time period of my data set, Granger causality test cannot be applied to examine the causality relationship between export performance to China and the visits performed by heads of states. However, we still treat causality issues by using instruments based on the findings of Moons et al. (2017). The findings state that the effects of diplomacy on economic performance is more significant than that of the other way around.

1.6 Relation to Development Studies

In the case of China and its BRI, it is worth to note that China has become the second largest economy in the world and a key partner in global economy system. The BRI involves a large number of countries with different level of developments across Asia, Europe, Africa, Oceania and Latin America. Many of them are low income and developing countries. In other words, economic influences of China via the BRI are currently involving all important regions and countries in the world. Therefore, a detailed research on impact of visits by head of states of the BRI countries to China and vice versa on their merchandise exports to China can not only help one understand more about the trade pattern within this initiative but also find out some implications related to advance countries in their export strategies as well as the implementation of development goals.

Economic diplomacy has recently played an important role in China foreign strategy and its magnitude is quite larger than that of Western economies (Fuchs, 2016). Although economic diplomacy has become more and more topical in academics, researches related to developing countries and emerging economies, especially China are still at a quite limited

level (Moons, 2017). Furthermore, the available researches are more focused on previous periods, from 1985 to 2012 with a small number of countries studied or with a short periods of years examined. Specifically, some papers only examine the diplomatic impacts on trade within one to three years. Hence, the research paper which studies on a wide range of countries with different characteristics over a period of six years from 2013 to 2018 will highly possible to provide readers an updated finding on the relationship between economic diplomacy and economic performance between China and the BRI's related countries. Importantly, the expected findings can give some implications for strategical implementations at country level to manage the development goals in coming years, especially in the Global South.

Chapter 2: Review of Literature

2.1 Introduction

The chapter will provide a reviewed theoretical frameworks and methodological strategies applied to examine the impact of diplomacy on economic performance in different samples in previous studies from 1945 to present.

2.2 Literature review

The relation between foreign trade and diplomacy has firstly been discussed since 1945 when countries could use their ability to stop commercial relations with others as a reflection of their powers (Hirschman, 1945). In other words, countries at that time tried to employ all resources, including diplomatic channels to secure trade with foreign partners as a main pillar in their power policy.

However, the terminology of economic diplomacy has not been a subject to academic research attention until 1980s. The frequency of those kinds of researches remains quite limited for the next 20 years until a higher interest from 2005 to 2012. According to Moons (2017), there are an average of more than 10 studies on this topic per 10 years.

The increase can be explained by theoretical developments beginning since the late 1970s and early 1980s. At this time, most developing countries, except East Asia economies faced economic crisis. The interesting point is that most of crisis countries was pursuing free market economy models. Stiglitz (1998) argues that issues of economies embedding imperfect information and incomplete markets are market failures which governments play an important role to correct. Gore (2000) supports this argument with an analysis that the economists' perceptions have gradually adjusted from worshipping the unique role of free markets to development with a neglection of role of governments towards a more balanced approach in the 1990s. This new approach requires closed collaborations between governments and market rules where governments via their policies can help businesses overcome difficulties such as missing markets, export risks, etc.

In the case of international trade, the role of government via its economic diplomacy has been proved to be more and more important in recent studies. In a broad context, economic diplomacy can help domestic enterprises access new markets, can utilize the socio-economic-political-cultural relationship of a home country with other countries to support its domestic enterprises, and sometimes to stop those kinds of relations in specific circumstances (Bergeijk and Moons, 2017). In a detailed context, economic diplomacy can have impacts on export, import, total trade volume or foreign direct investment into certain countries.

Diplomacy is a qualitative topic which requires researchers to employ instruments to examine diplomacy effects on economic performance. Since 1980s, there have been diversifications of instrument variables for diplomacy including embassies, consulates, embassies and consulates, foreign export promotion agency offices, export promotion agency, investment promotion agency, diplomatic relations, state visit, trade missions which are used to test on diplomacy impact on export, import, foreign direct investments on observed sample.

Some famous researchers in this field such as Nitsch (2007), (Zhang et al., 2011), Zhang et al. (2014), Fuchs (2016) work with the variable of state visits. Even there is no consensus on definition of state visits, all of them agree that the state-level trips have significant meanings in diplomatic relations between countries.

In general, visits led by heads of states are ranked as state visits, official visits, working visits or just visits to attend some ceremonies. Due to the heterogeneity of each kind of visits, its impacts on economic performance are also different, accordingly. Additionally, the place where heads of states meet each other can give observers difference messages. It is quite popular that visits by heads of states are multiple purposes, ranging from politics, economics, human rights, environment issues, etc. However, the top agenda is discussions related to economic matters (Nitsch, 2007; Fuchs, 2016).

In Nitsch (2007)'s study, the author employs the data recording official visits by heads of states of France, Germany and the United States for 55 years, from 1948 to 2003. The author only surveys the visits by presidents (of France and the United States) or by chancellor (of Germany) and does not examine the visits by heads of states of host countries to France, Germany and the United States. It is worth to note that tit-for-tat is one of principal conducts in diplomacy, and those kinds of visits can also co-impact on international trade. However, Nitsch (2007) manages to classify different types of visits, including state visits, official visits, working visits and other visits which are quite ambiguously different. Also, the researcher succeeds in testing the impact of ever visits and repeated visits within 0 to 5 year on international trade. The overall finding of this research is that a visit can increase from 8% to 10% of export. The finding is less robust for imports. This could be due to the lack of data of visits by heads of states of host countries to France, Germany and the United States. It is also a possible reflection of main purpose for export, not import of those visits.

Zhang et al. (2011) find that bilateral visits by heads of states of China and of its trade partners have positive and significant impact on trade of China with 78 countries from 1950 to 2002. The impacts are 0.04 per cent increases in trade in short term and 0.24 per cent in long term. However, their works do not investigate the causality between trade and politics which can cause biased results (Moons et al., 2017). Moreover, the sample is not a random selected one which can lead to biased estimation results. Also, the time series ranging from 1950 to 2002 embed different phases of China foreign policies in general and economic diplomacy in particular. Lack of this treatment can harm the paper's results.

In Zhang et al. (2014)'s study, the authors examine the impact of bilateral visits between China and the host countries and of the length of bilateral diplomatic relation on Chinese foreign direct investment outflow to 131 countries over the period of 10 years, from 2003 to 2010. In this research, the authors lump sum diplomacy instruments as number of bilateral visits by senior officers which will delete the heterogenous impacts of different types of visits. Their overall results find that visits by senior leaders of China and its counterparts have positively significant impact on Chinese investments. In other words, those kinds of visits can ensure the investors about their investments' feasibility and profitability; and in some cases, can make up for some risks in the host countries such as lack of information, poor developed institutions, etc.

In his research, Fuchs (2016) concludes that China's government put high priority on economic diplomacy because of its importance towards China's economic exchange. The importance is even great than that of Western economies. This conclusion is consistent with Zhang et al. (2011)'s findings. Taking Dalai Lama's visit to a certain number of countries as a proxy, the author finds that even though Chinese government expresses quite explicitly their hash objections to the host countries of Dalai Lama's visit; but as soon as within one year, Chinese leaders are willing to make a visit to that country for a relation restoration. According to Fuchs (2016), the difference between embassies and the visit by heads of states or other high-level meetings is that, the formers only reflects the normal diplomatic relations between countries while the latter can signal the level of friendliness between countries. This argument can be biased if consulates are taken into account. There is a reality that the numbers of embassy which is only one per a country and consulates which are varied depending on intensity of the bilateral relation. However, the visits can speak more on the status of bilateral relation between countries and normally, have instant impacts on trade exchange.

Apart from the states visits, other instruments for diplomacy have been widely used such as embassies and/or consulates such as Yakop and van Bergeijk (2011), Moons et al. (2017); international trade promotion center, trade attachés, embassies and consulates on exports by Maharani (2017).

In his meta-analysis about economic diplomacy, Moons (2017) points out that the using of lump - sum variable embassies and consulates could yield biased results because that kind of variables deleted the heterogeneity of those indicators. In other words, there is a big difference in strategically diplomatic importance of embassies and (general) consulates, that of embassies in different countries; that of general consulates and consulates; that of general consulates and consulates in different countries and in different regions within countries. Moons (2017)'s data overall finding is that, the number of coefficients of significantly positive implication (at p-value equals to 0.05) for economic diplomacy on economic performance is higher than that of insignificant positive and negative relations.

The work of Yakop and van Bergeijk (2011) is a development of a previous study done by Rose (2007) with a wider range of countries observed, especially low – income countries. The authors' instrument, which is the total number of foreign missions of a given country to another country, is classified into two smaller categories on the purpose of existence: to promote exports and to facilitate imports. The angle of import facilitation is also a novel reaching compared to that of Nitsch (2007) and some other researchers. The adding of new countries in their works is more meaningful to the development implications of economic diplomacy for the Global South. This addition allows the authors to conclude that countries' specifications will matter on the sign, size and magnitude of economic diplomacy impacts on economic performance. In other words, there is a significant positively relation between diplomatic instrument and economic performance in developing countries, but not in high income countries and upper middle income countries. Yakop and van Bergeijk (2011) find that their results are well in line with those of previous studies in the context of developing countries. They also reaffirm that trust breeding plays an important role in bilateral trade internationally. That is convincible because, historically, trust between governments can only be built based on a well-maintained diplomacy and must be started from the top level. The role of heads of states is extremely fundamental and crucial to pave the way for lower level working forces to implement further detailed moves.

On the same direction, Moons et al (2017) employ embassies, consulates separately as instruments for economic diplomacy to examine the impact of those diplomatic indicators on export of 63 countries from the United Nations Comtrade database in one year. The authors find that overall, the impact of embassies on trade is significant while that of consulates is not found. In a more details, the work of Moons et al (2017) flesh out the varied impacts of embassies and consulates, separately, on different kinds of exports, including differentiated goods, homogeneous goods and reference goods with ranging levels of statistically significance. In a numeric translation, the findings of Moons et al (2017) state that the existence of an embassy can increase 38 per cent of homogeneous goods, 112 percent of differentiated goods and 136 per cent of reference prices goods, other things hold constant.

Approaching on a different perspective, Maharani (2017) investigates the specific economic diplomacy on non-oil exports of Indonesia to 62 countries globally. Although there is a scale down in her economic performance indicators compared to those of Moons et al. (2017), her contribution is that the research context is within a developing country. The instruments authors used in her papers are the presence of international trade promotion center, the presence of a trade attaché and the number of embassies and consulates in a lump-sum variable of Indonesia in the host countries. As discussed earlier, those ways of instrumentalization could possibly yield biased results in two following ways: (1) The lump-sum embassies-consulates variable will remove the importance difference of those indicators, consequently impact the real findings as pointed out by Moons (2017); (2) The dummization of international trade promotion center and trade attaché cannot tell the impacts difference between the numbers of centers and trade attaché on Indonesia exports. The

paper's finding is noteworthy that there is no significant evidence for the relationship between embassies – consulates and Indonesia exports. Similarly, Head and Ries (2009) find that missions are ineffective in boosting trades between Canada and its partners. Those findings reflect the fluctuations in economic diplomacy on economic performance at non top levels.

In a summary, there have been a number of instruments for economic diplomacy to examine diplomatic impact on economic indicators including: export, import, export and import, and foreign direct investment. Compared to researches using variables such as embassies, (general) consulates, embassies-consulates, etc., those instrumentalized visits by heads of states is quite at its early development. The most outstanding one is done by Nitsch (2007). Research are either falling into small – long panel data (Nitsch, 2007;) or big – short panel data (Yakop and van Bergeijk, 2011; Moons et al, 2017) or even covering only one specific country (Maharani, 2017). Another promising area is that there are still limited researches on developing countries which are playing more and more important roles in global trade, especially in the case of China. Therefore, the research paper is expected to find some feasible conclusions which can strengthen the literature about economic diplomacy in today global scenarios.

2.3 Theoretical frameworks

The thesis will employ gravity model to examine the impacts of visits by heads of states of China and its trade country partners towards China's imports from other countries under the BRI scheme for several reasons as follows.

Since it was firstly introduced in 1962 by a group of Dutch economists headed by the famous Dutch economist, Tinbergen – then Nobel winner, the gravity model has been the main engine power for hundreds of papers (Yotov *et al.*, 2011). One of the strongest points of the gravity model in trade research is the model's capability to yield unbiased results. According to Yotov *et al.* (2011), the gravity model can utilize data at aggregate or dismantled levels to produce findings with the fitness level ranging from 60 percent to 90 per cent. Moreover, gravity model is very flexible in ways that it allows researchers to add new variable to accomplish their research related to trade matters. Also, the gravity model is profoundly theoretical based (van Bergeijk and Brakman, 2010), thanks to the works of famous economists such as Anderson in 1970; Bergstrand in 1985, 1989 and 1990; and especially the researches by Anderson and van Wincoop (2003).

The work of Anderson and van Wincoop (2003) gives richly detailed instructions on how to apply gravity models under the two country model and the multi-country model. Their key finding of trade dependency on multilateral resistance and bilateral resistance plays an important role in laying a profound theoretical base for gravity models which have been one of the most popular sources of reference for following researches on the topics (van Bergeijk and Brakman, 2010).

According to Yakop and van Bergeijk (2011), the simplest form of gravity model which is the two country model under the classification of Anderson and van Wincoop (2003), has the form:

$$T_{ij} = GDP_i^a * GDP_j^b * Distance_{ij}^c \qquad (2.1)$$

Where:

        GDP is the economic size of country i and country j;

        Distance refers to the physical distance between country i and country j;

Coefficients "a" and "b" which are larger than zero refers to the positive relationship between economic size and trade; while, the negative coefficient "c" message that distance and trade are negatively correlated.

However, the development of theoretical and empirical research methodologies allows researchers to include more variables in order to yield better results such as: internal distance, international distance, population, dummy variables of common languages/share border/currency union/ex-colonial relationship/as well as many other newly added variables. In the language of Anderson and van Wincoop (2003), if the "size" is controlled, the only thing matters is bilateral trade barriers which are related to multilateral resistance. It means that the recent developed versions of gravity model allow researchers to observe unobservable factors which can impact on trade. Those unobservable variables can tell much about the current physically and non-physically position of a given country on global trade map, as well as that country's relative position in its partner's economic performance.

Among a wide range of gravity model versions embedded economic diplomacy instruments, the research paper's author employs selectively the model used by Moons et al. (2017) and the model used by Zhang et al. (2014), respectively as follows:

2.3.1 Moons et al. (2017)'s model:

$$Ln(X_{ij}/Y_i*Y_j) = \beta_0 + \beta_1 lnD_{ij} + \beta_2 Lang_{ij} + \beta_3 Cont_{ij} + \beta_4 Land_{ij} + \beta_5 Island_j +$$

$$\beta_6 ln(Area_i * Area_j) + \beta_7 Col_{ij} + \beta_8 CU_{ij} + \beta_9 FTA_{ij} + \beta_{10} Embassy_{ij} + \beta_{11} Consulates_{ij} + \varepsilon_{ij} \qquad (2.2)$$

Where:

$Ln(X_{ij}/Y_i*Y_j)$ is the logarith of export propensity of country i to j to certain time, calculated by bilateral exports divided by income per capita country i and that of country j;

LnD_{ij} refers to the logarithm of physical distance between country i and country j;

$Cont_{ij}$ equal 1 if i and j have a common border, 0 otherwise;

$Land_{ij}$, takes value of 0,1,2 depends on numbers of landlocked countries in the pair;

$Island_j$ takes value of 0,1,2 depends on numbers of landlocked countries in the pair;

$Ln(Area_i * Area_j)$ refers to the logarithm of areas of trading countries in squared kilometers;

Col_{ij} equal 1 if i and j experience past and current colonial relation, 0 otherwise;

CU_{ij} equal 1 if i and j are parts of a single currency union, 0 otherwise;

FTA_{ij} equal 1 if i and j are in a bilateral trade agreement, 0 otherwise;

$Embassy_{ij}$ takes the value as number of embassy that country i has in country j;

$Consulates_{ij}$ takes the value as number of embassy that country i has in country j;

ε_{ij} is the error term.

2.3.2 Zhang et al. (2014)'s model:

$$FDI_{it} = \beta_0 + \beta_1 Visit_{it} + \beta_2 Conflict_{it} + \beta_3 Resource_{it} + \beta_4 GDP_{it} + \beta_5 GG_{it} +$$

$$\beta_6 Stability_{it} + \beta_7 BIT_{it} + \beta_8 Diplomacy_{it} + \beta_9 City_{it} + \beta_{10} Asia + \beta_{11} Europe + \varepsilon_{ij} \qquad (2.3)$$

Where:

FDI_{it} is Chinese outflow foreign direct investment;

$Visit_{it}$ is the total number of senior leaders' visit in a certain year. It is measure by the total number of bilateral visits, which are weighted as two for a visit by top national leaders and

one for a visit by others. Data are created from descriptive information in the official website of China's Foreign Ministry;

Conflict$_{it}$ defines the political conflict between China and the host country;

Resource$_{it}$ is measured by fuel/ores/metal export as share of GDP of host country;

GDP$_{it}$ captures the host country market size;

GG$_{it}$ is the growth rate of GDP;

Stability$_{it}$ is the political risk of the host country;

BIT$_{it}$ equals to 1 if China and country j are in a single bilateral investment treaty, 0 otherwise;

Diplomacy$_{it}$ defines the length of bilateral diplomatic relationship between China and the host country;

City$_{it}$ is the number of sister cities between China and the host country;

Asia equals to 1 if the host country is in Asia, 0 otherwise;

Europe equals to 1 if the host country is in Asia, 0 otherwise.

ε$_{ij}$ is the error term.

Although gravity model is more and more popular in trade studies, there are some kinds of traps in applying it. According to van Bergeijk and Brakman (2010), there are four main empirical concerns related to this model, including: solutions for observing multilateral resistance, the problems of zero trade flows, distance measurement biasedness, difficulties related to data level choosing.

As a part of trade analysis, economic diplomacy researches are more and more employed different versions of gravity model. Theoretically, the finding of multilateral resistance plays a crucial role in the development of economic diplomacy. One of studies which manages to find out the relations between the diplomacy and multilateral resistances is the work by Afman and Maurel (2010). By employing ordinary gravity model and Anderson and van Wincoop (2003) version of gravity model, they conclude that diplomacy has significantly positive impact on export and help reduce tariffs. Similar conclusions are also drawn with significance in the particular works of Rose (2005), Yakop and van Bergeijk (2011), Zhang et al. (2014), Moons et al. (2014).

Facing the same issues with the general usage of gravity model, there are some big issues for using gravity model in economic diplomacy research such as endogeneity, zero trade, heterogeneity (Yakop and van Bergeijk, 2011). Those arguments will be discussed in the next part of econometric issues and solutions.

Due to all aforementioned evidences, the research paper argues that using gravity model to study the impact of visits by heads of states of China and its trading country partners under the BRI's scheme is solid theoretically and empirically.

Chapter 3: Methodology

3.1 Methodology

Methodologically, my thesis will combine the models used by Zhang et al. (2014) and Moons et al. (2017). On one hand, the model used by Zhang et al. (2014) manages to utilize the "visits" variable as an instrument for economic diplomacy. That is one of the most outstanding contribution of the authors towards the studies of economic diplomacy under the BRI. Also, being necessary to say, this is a reduced version of gravity model from which, the authors only pay attention to deal with multilateral resistance. The physical indicators are now replaced by dummy variables of Asia, Europe and the baseline. Theoretically, this kind of treatment is once used by Anderson and van Wincoop (2003). However, one of their limitations is that, they leave out the possibility of causality between economic diplomacy and Chinese outward foreign direct investment without any treatment. This is one of the big econometric issues when applying gravity model in trade research (Yakop and van Bergeijk, 2011).

On the other hand, the model used by Moons et al. (2017) manages to build a well dependent variable, "logarithm of exports divided by income per capita of countries i and j observed". This kind of dependent variable fits well with the asymmetric data between one country and many other countries in the other side. It allows to track the impact of countries characteristics, especially the population variable, for a short period of time. Also, as Moons et al. (2017) claim, the dependent variable can help to avoid the causality possibility from trade flows to gross domestic product. More importantly, the work of Moons et al. (2017) identifies and provides a treatment for causality between economic diplomacy and trade. Their finding is that there is a causality between economic diplomacy and trade; and the impact of economic diplomacy on trade is more profound if trade complexity level increases. In my dataset, it could be assumed that the trade complexity level is high as I do not classify merchandise exports to China into different categories. The authors also provide the uses of instruments under the two stages least squares methodology to deal with the problem. One of the reliable instruments is the use of lagged value of dependent variable (Benmamoun and Lehnert, 2013).

As a result, the research paper would base on the basic gravity model with selective addition from the models discussed above. The selective directions are based on the fact that data related to imports of China from the BRI countries and economic diplomacy is asymmetric. This kind of dataset is a mixture of two country model and multi-country model proposed by (Anderson and van Wincoop, 2003). This approach is once applied by Maharani (2017).

Moreover, in economic diplomacy, there is a risk of heterogeneity of diplomacy instruments such as high-ranked embassies, low ranked consulates (Yakop and van Bergeijk, 2011). Meanwhile, the visit by heads of states are much more homogeneous. In other words, heads of states are normally referred to the political terms which normally lasts four to five years. In the case of China, the heads of states are normally named by the positions of country's president and its premier. Both positions will serve in a five-year long term and high probably, the services will be extended to the second term, except for extraordinary cases. Empirically, those positions in China still remain unchanged since 2013, coincidentally with the birth of the BRI. Hence, the state visits which involves in the heads of states is expected to be a better instrumental variable for economic diplomacy within the case of the BRI from 2013 to 2018.

As pointed out by Head and Ries (2009), the incorporation of regional trade agreements will make bilateral policy endogenous. In this case, it will be difficult to determine the causality direction between trade and policy. To avoid this dilemma, the researcher takes this

variable out of the basic model. It is also worth to note that, due to the research design, it is not possible to include bilateral and multilateral resistance. This issue is once treated by applying fixed effects in the works of Moons and Boer (2018).

Hence, the basic model used in this research paper is formulated as follows:

$$Ln(X_{ijt}/Y_{it}*Y_{jt}) = \beta_0 + \beta_1 LnD_{ij} + \beta_2 Ln(Area_i * Area_j) + \beta_3 Cont_{ij} + \beta_4 Landlock_j + \beta_5 TotalVisit_{ijt} + \varepsilon_{ij} \qquad (2.4)$$

Where:

$Ln(X_{ij}/Y_i*Y_j)$ is the logarith of export propensity of country i to China to certain time, calculated by the merchandise import by China from country j at year divided by income per capita country i at year t and that of China at year t;

LnD_{ij} is the logarith of distance between country i and China;

Y_{kt} is GDP per capita in dollars in year t, for k = {i, j};

$Ln(Area*Area)$ is the logarithm of area relations between China and its of trading partner in squared kilometers;

$Cont_{ij}$ is 1 if China and country j share a land border, 0 otherwise;

$Land_j$ is 1 if country j is a landlocked country, 0 otherwise;

$TotalVisit_{ijt}$ is the total point of visits by Chinese state leaders to country j and leader of country j to China at year t;

ε_{ij} is the error term.

There are some variables taken out from two benchmark models in my model because of the following reasons:

Firstly, the main based is the model used by Moons et al. (2017). However, due to the Chinese renminbi usage limitation in international trade, the common currency variable is taken out. The FTA variables is removed as well for the reason that the sample are focus on the BRI to better test the impact of economic diplomacy on China's import within this initiative. The same treatment is applied for the colonial relation variable due to the history case of China and its relation to the world since 1945, China has not officially (be) colonized (by) any other countries.

Secondly, the Embassy and Consulates variables are replaced by the "visits of heads of states" with different aspects thanks to the aforementioned arguments. The reasons for creating "visits by heads of states" are strongly motivated by the works of Zhang et al. (2014) and Nitsch (2007).

3.2 The extended versions of the basic model

Based on the basic model presented above, the author will then replace the "total general visit" variable by "state level visit" and "non-state level visit" variables to test the impact of different types of visits on China's merchandise imports.

Hence, there will be five more extended versions of the basic model as following:

3.2.1 Model to answer the sub-questions of "What is the difference in influence of "one **state-level** visit a year by heads of states" and "one **non-state level** visit a year by heads of states" on China's merchandised imports under the BRI from 2013 – 2018?"

$$Ln(X_{ijt}/Y_{it}*Y_{jt}) = \beta_0 + \beta_1 LnD_{ij} + \beta_2 Ln(Area_i * Area_j) + \beta_3 Cont_{ij} + \beta_4 Landlock_j +$$
$$\beta_5 StateVisit_{ijt} + \beta_6 NonStateVisit_{ijt} + \varepsilon_{ij} \qquad (2.5)$$

3.2.2 Model to answer the sub-questions of "What is the difference in influence of "one state-level visit a year by **Chinese** heads of states" and "one non-state level visit a year by **Chinese** heads of states" on China's merchandised imports under the BRI from 2013 – 2018?"

$$Ln(X_{ijt}/Y_{it}*Y_{jt}) = \beta_0 + \beta_1 LnD_{ij} + \beta_2 Ln(Area_i * Area_j) + \beta_3 Cont_{ij} + \beta_4 Landlock_j +$$
$$\beta_5 ChineseStateVisit_{ijt} + \beta_6 ChineseNonStateVisit_{ijt} + \varepsilon_{ij} \qquad (2.6)$$

3.2.3 Model to answer the sub-questions of "What is the difference in influence of "one state-level visit a year by **the BRI** heads of states" and "one non-state level visit a year by **the BRI** heads of states" on China's merchandised imports under the BRI from 2013 – 2018?"

$$Ln(X_{ijt}/Y_{it}*Y_{jt}) = \beta_0 + \beta_1 LnD_{ij} + \beta_2 Ln(Area_i * Area_j) + \beta_3 Cont_{ij} + \beta_4 Landlock_j +$$
$$\beta_5 BRIStateVisit_{ijt} + \beta_6 BRINonStateVisit_{ijt} + \varepsilon_{ij} \qquad (2.7)$$

3.2.4 Model to answer the sub-questions of "What is the difference in influence of "one state-level visit a year by **Chinese** heads of states" and "one state level visit a year by **the BRI** heads of states" on China's merchandised imports under the BRI from 2013 – 2018?"

$$Ln(X_{ijt}/Y_{it}*Y_{jt}) = \beta_0 + \beta_1 LnD_{ij} + \beta_2 Ln(Area_i * Area_j) + \beta_3 Cont_{ij} + \beta_4 Landlock_j +$$
$$\beta_5 ChineseStateVisit_{ijt} + \beta_6 BRIStateVisit_{ijt} + \varepsilon_{ij} \qquad (2.8)$$

3.2.5 Model to answer the sub-questions of "What is the difference in influence of "one non- state level visit a year by **the Chinese** heads of states" and "one non-state level visit a year by **the BRI** heads of states" on China's merchandised imports under the BRI from 2013 – 2018?"

$$Ln(X_{ijt}/Y_{it}*Y_{jt}) = \beta_0 + \beta_1 LnD_{ij} + \beta_2 Ln(Area_i * Area_j) + \beta_3 Cont_{ij} + \beta_4 Landlock_j +$$
$$\beta_5 ChineseNonStateVisit_{ijt} + \beta_6 BRINonStateVisit_{ijt} + \varepsilon_{ij} \qquad (2.9)$$

3.3 Regression methods

The research paper will employ Ordinary Least Squares to test the impact of visits by heads of states on China's merchandise imports from the BRI countries. Also, due to the fact that our data is a short-big panel data, fixed effects and random effects are also employed to examine the impacts of time variant variables and that of time invariant variables on economic performance. Lastly, due to the possibility of reversed causality, our paper will used lagged one value of growth rate of dependent variable as an instrumental variable under the two states least square to solve the problems.

3.4 Econometric issues and solutions

According to Batra (2006), Moons et al. (2018), there are some econometric problems related to the used of versions of gravity model in trade analysis as follows:

3.4.1 Multicollinearity:

After running the test of multicollinearity, Batra (2006) concludes that this issue is not a problem. Moreover, the 'robust'' function of Stata software can also help to deal with this problem effectively.

3.4.2 Endogeneity:

Batra (2006) realizes that there is a high possibility of endogeneity between trade and income in the author's model. Similarly, Moons et al. (2018) recognize the reversed causality between diplomacy and export. This recognition is in well line with the assumption by Yakop and van Bergeijk (2011). Those issues can impact the correction and accuracy of regression results. To deal with this issue, Head and Ries (2009) suggest to use lagged dependent variables as controller because it can be helpful when previous trade volume influence the status of current diplomacy presence.

Hence, they all offer using instruments to solve the problems. Going further, Yakop and van Bergeijk (2011) and Moons et al. (2017) suggest to use two stage least squares with instruments to treat this problem. Regarding the impact of using instruments on regression results, Batra (2006) and Yakop and van Bergeijk (2011) emphasizes that there will no significant impacts on coefficients when instruments are employed. Especially, the size of coefficient even increase after being treated by instruments in the work of Yakop and van Bergeijk (2011).

3.4.3 Zero trade flows:

Batra (2006) points out that there could be an existence of zero trade between some pairs of country. These zero values will invalidate the log linear regression. However, the sample data in our research paper does well solve this problem with no zero trade flows between China and other countries under the BRI.

3.4.4 Heterogeneity:

International trade engages two at least or more than two countries as pointed out by (Anderson and van Wincoop, 2003). The fact is that country is different from other countries in many aspects. This leads to the risk of heterogeneity in applying gravity model in analyzing trade because of omitted variable bias. To deal with this problem, Cheng and Wall (2005) suggest the usage of fixed effect model to capture the impact of time invariant variables over time. They also reaffirm that in case of time dummy existence, the restriction on time effect is required to avoid the (multi)collinearity.

3.4.5 Heteroskedasticity:

Due to the possibly risk of heteroskedasticity, the author will perform tests for heteroskedasticity to ensure our selections of variables and model. Robust method is also applied to treat this issue.

Chapter 4: Data

4.1 Data and Data Collection

4.1.1 Visits by heads of states:

Based on the primary data published at the official website of Foreign Ministry of China at https://www.fmprc.gov.cn/mfa_eng/, at the sub-page of "Countries and Regions", accessed May 07 2019, the author manages to code 430 visits which are grouped into state visits and non-state visits.

The state visits here are defined as visits by heads of states to their counterpart's land which includes the state visits, official visits or working visits. The non - state visits are defined as visits by heads of states to their counterpart's land for nominal purposes such as to attend ceremonial events or multilateral forums. **Hence, any visit to a third country will not be taken into consideration.**

Empirically, there is a possibility for this kind of duo visits. Its means that the heads of states will take advantage of a ceremonial visit to have been received by the host counties at a level of state visits, or official visits or working visits. Those kinds of visits will be counted as a state visit due to its higher importance and policy implications.

Under the scheme of this research papers, there will be only two groups of visits distinguished: state visits including state visits, official visits, working visits and non-state visits. One important thing to be noted is that all visits in this study are performs by heads of states. Heads of states are the positions of president and prime minister in most cases. Some exceptional cases are also notified in the website of Chinese Foreign Ministry.

The Figure 1 below will help readers to grasp the development of visits by heads of states through years. The Figure 1 shows that in 2013, 2014, 2016, state visits outnumbered non-state visits. Also, we can find that there is a high demand for diplomatic visits between the BRI countries and China in 2014, 2015 and 2018. The years of 2016 and 2017 witnessed a slow-down in visits by heads of states.

Figure 1: Distributions of visit types a year
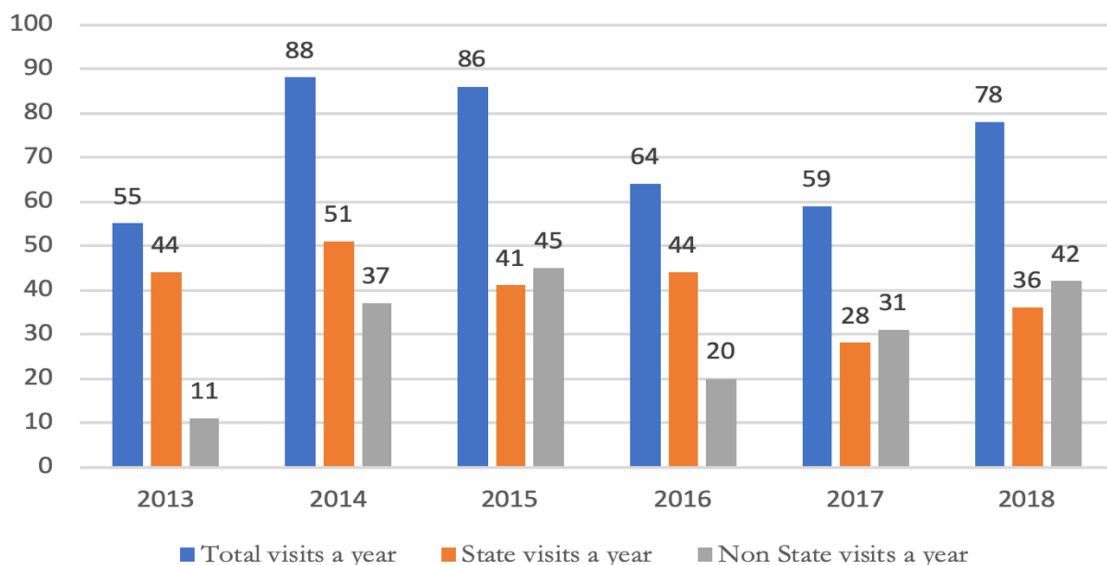
Source: Author's calculations based on the primary data about diplomatic activities between China and countries under the BRI, at the official website of Foreign Ministry of China at https://www.fmprc.gov.cn/mfa_eng/, at the sub-page of "Countries and Regions", accessed May 2019.

Based on the continent category, the Figure 2 below shows that nearly half of total visits performs between China and its BRI partners which are located in Asia. The runners are Africa and then Europe. Those analysis can give readers some ideas about the importance of Asia, Africa and Europe towards the China's implementation of the BRI compared to America and Ocean regions.

Figure 2: Distribution of visits per continent
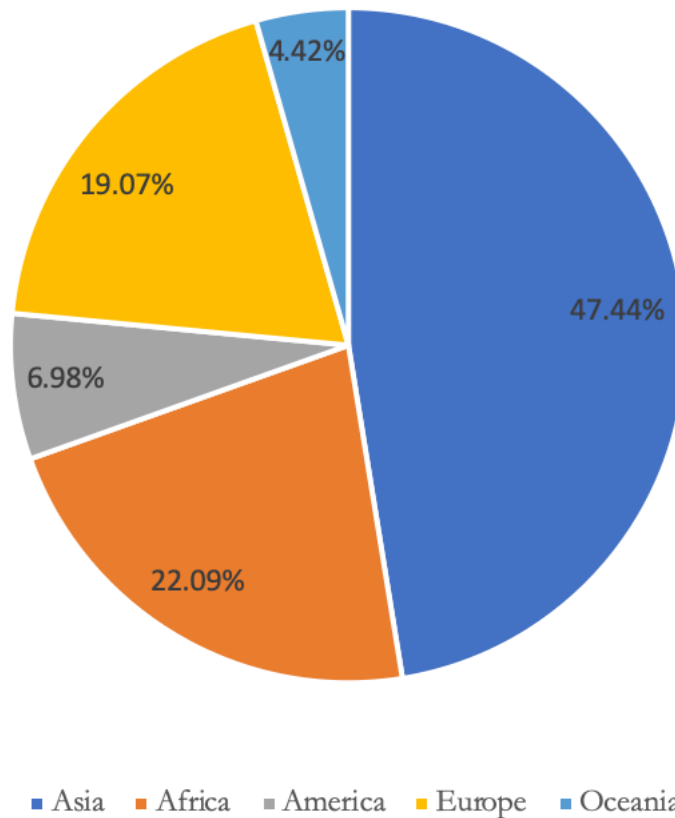
Source: Author's calculations based on the primary data about diplomatic activities between China and countries under the BRI, at the official website of Foreign Ministry of China at https://www.fmprc.gov.cn/mfa_eng/, at the sub-page of "Countries and Regions", accessed May 2019.

Although there is no consensus on how to classify different types of visit, there are still some clear diplomatic and communication indicators to identify them as follows:

Firstly, in the side of China, as the second largest economies in recent years, the oversea visits by Chinese President Xi Jinping and Chinese Premier Li Keqiang are in majority named state visits. Normally, there will be a kind of press conference or press report before and after the trips which are available on the official website of Chinese Foreign Ministry.

Moreover, the length of those kinds of visits are longer than the second group visits. One more important indicator is the formal diplomatic reception. As usual, the state visitors will be received with the highest level, held by both the president and prime minister or equivalent positions of the host countries. There will be a salute ceremony and the kinds of meetings which attract a wide range and long list of participants. Those kinds of visits are normally in the spot of media and are reported more deeply than the second group visit.

Secondly, in the side of China's trading partners, the general treatments are also applied in terms of the hosts, the level of receptions, the agenda of meetings.

Thirdly, visits in this research paper are bilateral visits. It means that visits are only counted if they occur in the land of China or the land of China's trading partners. Any other meetings between heads of states of China and its partners in the third country or at a demise of an international organization such as United Nations, World Trade Organization, etc. will not fall into our calculation.

In the light of aforementioned directions, the authors apply semi-primary data collection based on the descriptive information available at the official website of Foreign Ministry of China at https://www.fmprc.gov.cn/mfa_eng/, at the sub-page of "Countries and Regions", accessed May 07 2019. This source of data is once used by Zhang et al. (2014) for the data of state visit of Chinese leaders and their counterparts globally.

The coding methodology is that, if a visit meets the requirements of state visits in terms of the hosts, the level of receptions, the length of trip, the length and depth of media report, the level of entourage, the visit will fall into group one. Otherwise, the visit belongs to group two. The coding will be implemented on a basis of continents, countries, years from 2013 to 2018 with a reference to the research paper's final lists of the BRI countries. This approach allows authors to track the data in a month and year details with an elaborated direction of visits. **The details will be available in the appendix.**

4.1.2 Names of countries listed under the BRI:

There have been no official data for the BRI's countries. Countries listed in the sample are based on the BRI's member states listed in the official website of *The Hong Kong Trade Development Council at* https://home.hktdc.com with a close reference to the official web site of Foreign Ministry of China for the non-zero diplomatic activities between China and those countries.

The Hong Kong Trade Development Council is a statutory body which is established in 1966. The Council's mission is to facilitate trade between Hong Kong and the rest of the world. As of June 19, 2019, the Council has 50 offices around the world, including 13 in the Mainland China. According to the statistics of the Council, there are 131 countries falling into the BRI coverage, including 36 countries in Africa, 40 countries in Asia, 29 countries in Europe, 17 countries in Caribbean and the America regions, and 09 countries in Oceania. The detailed list will be presented in the Appendix.

However, the number will be reduced when we make reference to the official website of Foreign Ministry of China. There are 14 countries with no real diplomatic activities between China being taken out of the sample. They are 5 countries in Caribbean and the Americas regions (Antigua and Barbuda, Barbados, Dominican Republic, El Salvador, Guyana); 04 countries in Asia (Bhutan, Lebanon, Oman, Syria); 01 country in Africa (Madagascar); 02 countries in Europe (Moldova, Slovakia); and 02 countries in Oceania (Cook Islands, Nieu). The detailed list will also be presented in the Appendix.

4.1.3 Bilateral trade:

Data on bilateral merchandise trade flows in millions of US dollars at free-on-board prices are collected from the International Monetary Fund *Direction of Trade Statistics, accessed May 2019* for the years of 2013-2018 over the sample of China's and the rest of its trading partner globally. Data on China's bilateral exports and imports of merchandise goods are available. Based on this raw material, we filter out some around 100 countries which does not belong to the list of the BRI countries. Some other countries in the lists are also removed due to the lack of data.

Primarily analyzing the dataset, I find that there are huge gaps in trade volume between China and its BRI partners while the difference in the range of all visits is from 0 to 6. In

detail, some of countries' exports to China are around zero or less than one million per year over the study period, including: Maldives, Samoa, Seychelles, Timor-Leste and Tonga. On the contrary, many countries such as South Korea, Vietnam, Malaysia, Russia, Indonesia, Thailand, Indonesia, Angola, Saudi Arabia, Venezuela, etc. export to China a large volume of merchandise goods, worth over USD 10,000 millions.

These characteristics of data could create some biased results due to wide variance and heteroskedasticity. Hence, we decided to take out of the sample countries whose annual export to China on average over the period is less than USD 100 million. This treatment also helps to solve the issue of zero trade flows which is popular in applying gravity model in trade research. After our treatment, the sample is reduced to 89 countries. Some failed to meet the standard countries are removed, such as: Afghanistan, Bosnia and Herzegovina, Burundi, Fiji, Gambia, Georgia, Kenya, Nepal, etc.

4.1.4 GDP per capita data (in US dollars):

Data on GDP *per capita* is obtained from the IMF *World Economic Outlook* Database, accessed April 29, 2019. Some other countries such as: Somali, Syria, South Sudan are removed due to the lack of information. The same case happens to Cuba. However, Cuba is one of the countries enjoying most vivid diplomatic activities with China. Hence, the authors try to secure this observation by making up data from other sources. In details, the Cuba's GDP per capital for years from 2013 – 2017 is extract from www.tradingeconomics.com and the year of 2018 is calculated from that of 2017 times average growth rate of 2013-2017. Data is accessed on May 07, 2019.

Because of the difference in unit of measurement between GDP per capita (in US dollars) and China's import (in US dollars, millions), the author also takes a further step to convert the unit of China's import into US dollars when we calculate the Export Propensity of BRI countries to China. This treatment helps to ensure the dataset's consistency before taking the logarithm.

4.1.5 Distance, area, common border, and landlockedness:

Data on distance, area, common borders and landlockedness are collected online from CEPII (Centre d'Etudes Prospectives et d'Informations Internationales). The research paper uses the "dist" variable which is measured based on the latitudes and longitudes of the most important cities or agglomerations in terms of populations (Mayer and Zignago, 2011).

The same sources of data for area (in squared kilometers) and common border, landlockedness as dummies variables.

4.1.6 The dependent variable

The dependent variable – the export propensity of country i to China is calculated by the merchandise imports by China from country j at year divided by income per capita country i at year t and that of China at year t. This calculation is based on the primary data of bilateral trade and GDP per capita of all observed countries mentioned at articles 4.1.2 and 4.1.3 of this part.

This approach was once used by Moons et al. (2017). Also, this way of creating the dependent variable can help my model to include the impact of population variable on trade which is asymmetrically examined. In other words, instead of putting the population on the right part of equation, the author moves the population to the left side due to the dataset's characteristics.

4.2 Conclusion

The gravity model applied in our research paper are well based on theoretical and empirical foundations. The contribution of my approach is that the research paper is one of the first which to employ visits by head of states as instruments for economic diplomacy to study export of the BRI countries to China. Even the way of creating our diplomatic instrument is also implemented by other researchers such as Zhang et al. (2014), the research paper's scale within the BRI is firstly applied.

The dataset is well located in terms of reliable sources and collecting methodologies. Also, the research paper is able to identify the possible econometric issues and present solutions for each issue with a close reference to literatures and empirical reviews. One of the main problems is the reversed causality between economic diplomacy and imports by China. Even the Granger test is inapplicable in this case due to the short period of time, the paper still follows the assumptions of Moons et al. (2017) to treat causality issue.

Hence, in all regressions, the author will employ ordinary least squares to firstly test the effect of two groups of visits by heads of states under the BRI scheme towards China's merchandise import. Then, to treat the heterogeneity, fixed effects for countries and times is also applied. Random effects are also applied to observe the time variant regressors. Lastly, two stage least squares with lagged one value of growth rate of dependent variable will be employed to treat the causality between diplomacy instrument and dependent variable.

Chapter 5: Results and Analysis

5.1 Data Description

5.1.1 Data descriptive summary

The dataset used in my research paper is a strongly balanced panel data set because the author only include BRI countries whose export to China yearly exceeds USD 100 billion from 2013 to 2018 with an aim to avoid the zero trade issue and zero diplomatic exchanges between China and its BRI partners. Hence, the final dataset covers 89 countries in Asia, Europe, Africa, America and Caribbean regions, and Oceania. This number is lower than the public number of the BRI countries listed at the official website of *The Hong Kong Trade Development Council at* https://home.hktdc.com with a close reference to the official web site of Foreign Ministry of China.

The time period ranges in six years, from 2013 – 2018. All the data are collected on a yearly basis.

The dependent variable is China's merchandise imports from other countries. It is calculated by scaling China's merchandise imports from the BRI countries to the income per capital of China and the studying country at a given year. The mean value of dependent variable is 3.5 with a standard deviation of 1.98. The values of dependent variable run from -1.34 to 7.87. The negative values of dependent variable refer to the less than one results of ration between China's merchandise import over income per capita of China and that country at a given year.

There are six main independent variables, including distance, area, landlockedness, contingency standing for sharing borders, five region dummy variables, visits by heads of states categorized into two groups. Among those variables, distance, area, landlockedness and contingency are time – invariant variables while visits is time variant.

The most important explanatory variable in our model is visits. At the basis level, we have the data of total visits made by heads of states of China and the BRI countries at a given years. On average, there is around 0.7 visit perform by heads of states in general. The highest number of visits recorded is 06. This is the case between China and Lao Democratic Republic in 2016. There are two more cases of 05 total visits a year. That is the case of Russian Federation - China in 2017 and Kazakhstan – China in 2015.

In a more detailed approach, the dataset is sub-categorized into China's state visits, China's non-state visits, partner's state visits, partner's non-state visits, total state visits, total non-state visits at a given year. This categorization enables the author to understand the possible variations of impacts of all kinds of visits on China's merchandise imports from the BRI countries.

It is also interesting to find out that, within the BRI, Chinese heads of states, here are President Xi Jinping and Premier Li Keqiang only make one visits at state level a year. The same conduct is applied for visits at non-state level. Specifically, our data show that these two Chinese heads of states hardly make any non-state level abroad trip, just 1.5 per cent over 534 observations. On the other hand, the figure on partners' sides are higher. The maximum value of partner's state visits and non-state visits at a given year is 3, with a mean value for both is around 0.26. Those statistics can provide some implications for the imbalance and the need to perform visits by heads of states among Chinese leaders and their counterparts under the BRI. In other words, on economic perspective, countries in the BRI seem to put higher efforts to boost their economic relations with China than that of China.

In our comparison between state visits and non-state visits, the mean value of state visit is quite higher than that of non-state visits at a given year. It implies that on average, within the BRI, state visits are still the main thrust for economic cooperation among countries compared to other kinds of visit. The details descriptive elaboration of those variables is in the following Table 1.

Table 1: Variable description

(N=534)

Variables	Mean	Std.Dev	Median	Min	Max
LnExPropen	3.52	1.99	3.56	-1.35	7.87
LnDistance	8.89	0.55	8.92	6.86	9.86
Ln(Area*Area)	28.30	1.91	28.60	21.83	32.73
Landlockedness	0.18	0.38	0	0	1
Contingency	0.09	0.29	0	0	1
Asia	0.36	0.48	0	0	1
Europe	0.22	0.42	0	0	1
Africa	0.29	0.46	0	0	1
America	0.10	0.30	0	0	1
Pacific	0.02	0.15	0	0	1
Number of China's state visits a year	0.14	0.35	0	0	1
Number of China's non state visits a year	0.01	0.12	0	0	1
Number of partner's state visits a year	0.27	0.46	0	0	3
Number of partner's non state visits a year	0.26	0.52	0	0	3
Number of state visits a year	0.41	0.59	0	0	4
Number of non-state visits a year	0.28	0.55	0	0	4
Total visits a year	0.69	0.85	1	0	6

5.1.2 Correlations between independent variables:

The author has implemented correlation matrix to examine the possible relation between independent variables. The Table 2 shows that there is no serious collinearity among

independent variables in the basic model because the highest value of correlation matrix is 0.6377, lower than a popular threshold of 0.8.

Detailed correlation matrix between independent variable for special extended models will are available at the Appendix 2.

With the same background, the Table 3 identifies two cases of high probability of collinearity. They are between "number of state visits a year" and "number of partner's state visits a year (value = 0.807); and "number of non-state visits a year" and "number of partner's non-state visits a year (value = 0.9763). In fact, due to the onset research questions, those pairs of variables are not simultaneously employed in regressions. It means that multi - collinearity is not a big problem in the model. This is well in line with findings of Batra (2006).

Table 2: Correlation matrix between independent variables in the basic model (N=534)

	LnExPropen	LnDistance	Ln(Area*Area)	Landlockedness	Contingency	Total visits a year
LnExPropen	1					
LnDistance	-0.3128	1				
Ln(Area*Area)	0.6377	0.0068	1			
Landlockedness	-0.0277	-0.1469	0.0587	1		
Contingency	0.3515	-0.5033	0.312	0.1598	1	
Total visits a year	0.3246	-0.353	0.2426	0.1099	0.4886	1

Table 3: The correlation matrix between independent variables

(N=534)

	LnDistance	Ln(Area*Area)	Landlockedness	Contingency	Number of China's state visits a year	Number of China's non state visits a year	Number of partner's state visits a year	Number of partner's non-state visits a year	Number of state visits a year	Number of non-state visits a year
LnDistance	1									
Ln(Area*Area)	0.0068	1								
Landlockedness	-0.1469	0.0587	1							
Contingency	-0.5033	0.312	0.1598	1						
Number of China's state visits a year	-0.1909	0.1661	0.0239	0.2719	1					
Number of China's non-state visits a year	-0.1015	0.1388	0.0226	0.2307	0.0844	1				
Number of partner's state visits a year	-0.1306	0.0659	0.0747	0.2123	0.0239	0.1276	1			
Number of partner's non state visits a year	-0.3067	0.1927	0.0907	0.37	0.0988	0.1749	0.0154	1		
Number of state visits a year	-0.2163	0.1503	0.0734	0.3289	0.6091	0.151	0.8074	0.0705	1	
Number of non-state visits a year	-0.3099	0.2113	0.09	0.3977	0.1112	0.3837	0.0424	0.9763	0.0993	1

5.1.3 Scatter plot between visits by heads of states and China's merchandise imports

Using the scatter graphics, the author finds that there the majority of Chinese merchandise imports are falling on the range from 0 to 3 visits a year. There are three special cases of Laos Democratic Republic, Russian Federations and Kazakhstan which are three countries with highest number of total visits a year. Simultaneously, their merchandise export to China is well above the average value of the sample. The equivalence between number of total visits a year and the volume of merchandise exports to China by Laos, Russia and Kazakhstan could give some implications in the level of economic and diplomatic relationships between each country and China, respectively. Moreover, those cases can also play as a key pillar in China's economic diplomacy under the BRI.
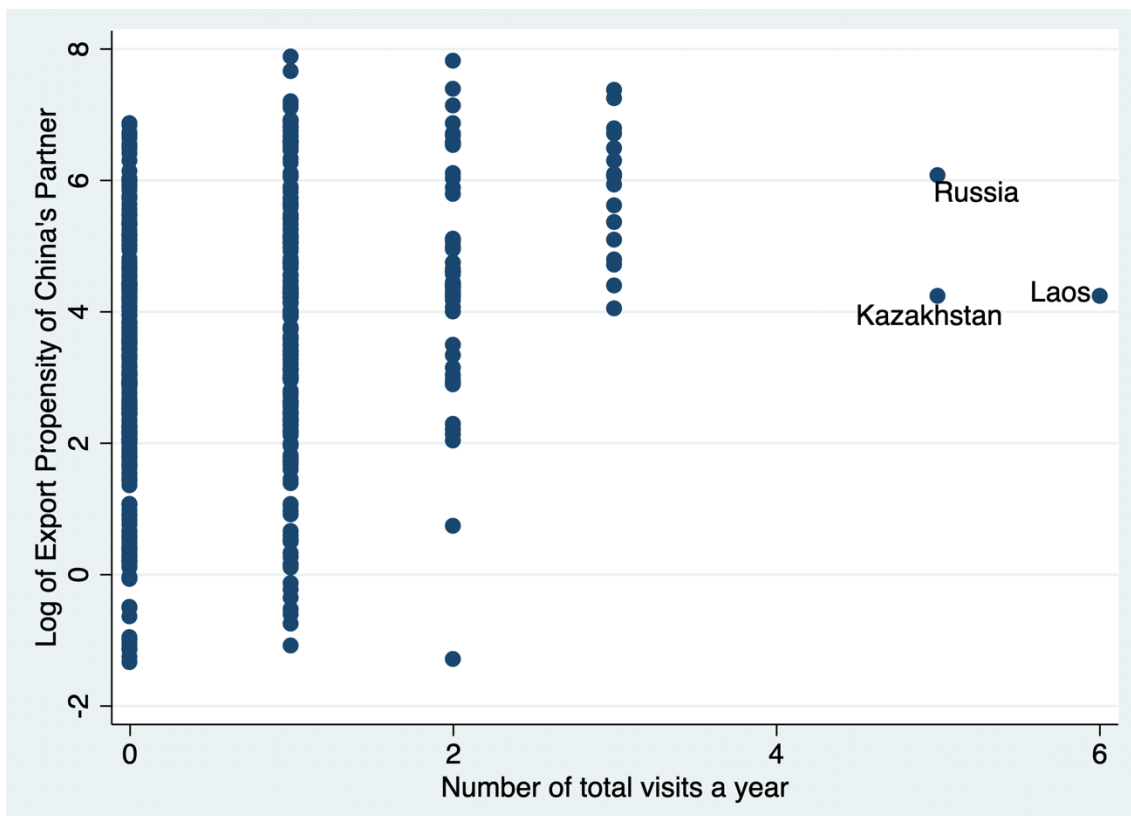
Source: Author's calculations based on the primary data available on from the International Monetary Fund Direction of Trade Statistics, accessed May 2019 and primary data about diplomatic activities between China and countries under the BRI, accessed May 2019.

5.1.4 Distribution of value of Logarithm of Export Propensity of China's partners

To investigate the distribution of dependent variable, the author implements the histogram graphics. I also run Skewness and Kurtosis test with the value is supportive to our overall assumption that we can reject the hypothesis that the Log of Export Propensity of China's partners to China is normally distributed.

The test results are presented in the following Table 5.

Table 5: **Skewness/Kurtosis tests**

		Skewness/Kurtosis tests for Normality			
				joint	
Variable	Obs.	Pr(Skewness)	Pr(Kurtosis)	adj chi2(2)	Prob>chi2
LnExPropen	534	0.0401	0.0069	10.57	0.0051

The author also performs the histogram graphics which depicts that the majority of the dependent variable is distributed between 2 and 5 of log of Export Propensity of China's partners. This graphic simulation is well in line with the Skewness/Kurtosis tests' results.
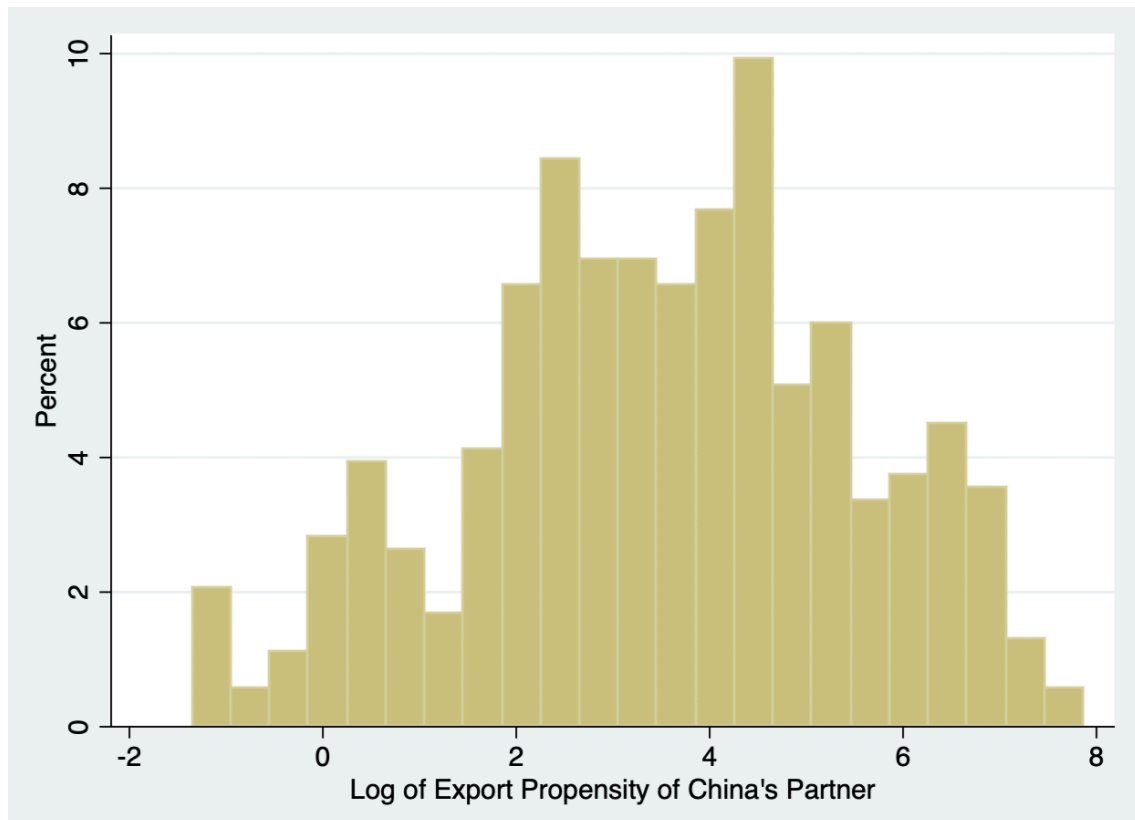
Source: Author's calculations based on the primary data available on from the International Monetary Fund Direction of Trade Statistics, accessed May 2019.

5.2 Regression results

5.2.1 The basic model:

In the basic model, impacts of the main independent variable - "number of total visits a year" on China's merchandise imports from the BRI countries are significant with all methodology approaches, including OLS, FE, RE, 2SLS. We also run F-test to test the multicollinearity among independent variables in our basic model. The result with

chi2(6)=110.75 and p value = 0.0000 allows to reject the null hypothesis. So, there is no risk of multicollinearity between dependent variables employed in my model.

Table 6: Regression results of the basic model of the equation 2.4

VARIABLES	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen
	(OLS)		(FE)		(RE)		(2SLS)
LnDistance	-1.207***	-1.191***			-1.207***	-1.191***	-1.366***
	(0.29)	(0.29)			(0.31)	(0.31)	(0.38)
Ln(Area*Area)	0.674***	0.671***			0.674***	0.671***	0.731***
	(0.10)	(0.10)			(0.08)	(0.08)	(0.19)
Landlockedness	-0.593**	-0.596**			-0.593	-0.596	-0.610**
	(0.30)	(0.30)			(0.38)	(0.38)	(0.26)
Number of total visits a year		*0.0586*		*0.0568**		*0.0586**	*0.207*
		(0.03)		(0.03)		(0.03)	(0.12)
Constant	-4.735	-4.809	3.607***	3.576***	-4.735	-4.809	-4.693**
	(4.03)	(4.01)	(0.04)	(0.05)	(3.24)	(3.21)	(2.13)
Observations	534	534	534	534	534	534	356
R-squared	0.52	0.52	0.07	0.07	0.52	0.52	0.43
Adj R-squared	0.52	0.52	0.06	0.06	0.52	0.52	0.42

Robust standard errors in parentheses

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

The Table 6 only shows significant results. It is worth to note that all significant results have expected signs. The model's findings are as follows:

Firstly, distance has negatively significant impacts on China's merchandise import from the BRI countries. The significant levels and the sign of impacts remain unchanged when we applied different econometric methods of regressions. The effect magnitudes are that if distance increase by one percent, the volume of China's merchandise import will reduce in a range of 1.19 per cent to 1.36 per cent.

Secondly, the area plays a significant and positive impact on China's merchandise imports. The significant levels and sign of impact also remain stable when we rotate our regression method between OLS, FE, RE and 2SLS. If the area*area increases by one per cent, China will import around 0.67 per cent to 0.73 per cent higher of merchandise goods from its trading partners within the initiative.

Thirdly, landlockedness is an interesting variable. Although our findings show that the significant level fluctuates when different methodologies are applied, the sign of impact of landlockedness on trade remains unchanged. In other words, bilateral trade will be harmed if China's given trading country is landlocked. For 95 per cent of confidence, the reduced amount of exports by a landlocked country to China is around 59 per cent to 61 per cent lower compared to that of a non-landlocked country.

Fourthly, the results of equation 2.4 which are not presented in the Table 6 show that there are no significant evidences to draw any relationship between border variable and trade within the BRI.

Fifthly, the findings regarding my main variable of interest have expected signs and are consistence in terms of sign of impact. Overall, the visits by heads of states has significantly positive impact on China's merchandise import from its BRI's trading partners. While OLS

and 2SLS report results with 90 per cent of confidence, the significant level increases to 95 per cent of confidence when FE and RE are employed. The magnitude of effect also increases when I employ instruments to treat the causality between trade and economic diplomacy. However, the instruments reduce the significant level from 95 per cent to 90 per cent of confidence.

Accordingly, every visit made by heads of states of China or China's BRI trading partners will increase Chinese merchandise import by an amount range of 5.8 per cent. Especially, the impact is amplified to 20.7 per cent when instruments are employed.

Finally, the research paper's model can predict the dependent variable with around 42 per cent to 53 per cent fitness of the dataset.

5.2.2 The extended model with state visits and non-state visits variables

Theoretically and empirically, there are different impacts of type of visits by heads of states on trade. For that reason, the research paper will replace the "number of total visits a year" variable by two sub-variables as follows: "number of state visits a year" and "number of non-state visits a year". This approach can help to distinguish impact between each kinds of visits. Methodologically, the author applies the same ways as we treat our basic model, including OLS, FE, RE, and 2SLS. The results are presented in the Table 7.

Table 7: Regression results of the basic model of the equation 2.5

VARIABLES	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen
	(OLS)		(FE)		(RE)		(2SLS)
LnDistance	-1.207***	-1.192***			-1.207***	-1.192***	-1.358***
	(0.29)	(0.29)			(0.31)	(0.31)	(0.37)
Ln(Area*Area)	0.674***	0.671***			0.674***	0.671***	0.731***
	(0.10)	(0.10)			(0.08)	(0.08)	(0.19)
Landlockedness	-0.593**	-0.596**			-0.593	-0.596	-0.601**
	(0.30)	(0.30)			(0.38)	(0.38)	(0.26)
Number of state visits a year		*0.0645**		*0.0551*		*0.0645**	*0.329***
		(0.03)		(0.04)		(0.04)	(0.16)
Number of non-state visits a year		0.0513		0.0589		0.0513	0.0541
		(0.05)		(0.04)		(0.04)	(0.16)
Constant	-4.735	-4.807	3.607***	3.576***	-4.735	-4.807	-4.802**
	(4.03)	(4.01)	(0.04)	(0.05)	(3.24)	(3.18)	(2.13)
Observations	534	534	534	534	534	534	356
R-squared	0.52	0.52	0.065	0.073	0.52	0.523	0.44
Adj R-squared	0.52	0.52	0.056	0.061	0.52	0.52	0.43

Robust standard errors in parentheses

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

With this model, the findings are similar to that of the basic model. Main findings are as follows:

Firstly, distance has negatively significant impacts on China's merchandise import from the BRI countries as it shows in the basic model. The significant levels and the sign of impacts are consistent at 99 per cent of confidence with different models of regressions. The effect magnitudes are that if distance increase by one percent, the volume of China's merchandise import will reduce in a range of 1.19 per cent to 1.36 per cent.

Secondly, the impacts of area on China's merchandise imports are significant and positive. The significant levels and sign of impact also remain stable when we rotate our regression method between OLS, FE, RE and 2SLS. In details, if the area*area increases by one per cent, China's import will increase around 0.67 per cent to 0.73 per cent.

Thirdly, landlockedness' impacts remain unchanged. Via different methodologies are applied, the sign of impact of landlockedness on trade is always negative with different level of significant. Yet, only OLS and 2SLS yield significant results at 90 percent and 95 per cent of confidence. In other words, countries are badly impacted by their water connections in their trade with China. For 95 per cent of confidence, the impact is from 81 per cent to 82 per cent.

Fourthly, similar to the results in our basic model, the new results show that there are no significant evidences to draw any relationship between border variable and trade within the BRI even though the sign of coefficients is negative. These results are hidden for the convenience of readers.

Fifthly, the findings regarding our main variables are consistence in terms of sign of impact. Overall, the state visits by heads of states has significantly positive impact on China's merchandise import from its BRI's trading partners why that of non-state visits is insignificantly positive.

While OLS, RE and 2SLS report significant results. If the OLS and RE provide results with 90 per cent of confidence, the 2SLS increases the significant level to 95 per cent of confidence. The magnitude of effect also increases when we apply instruments to treat the causality between trade and economic diplomacy.

Accordingly, every state visit made by heads of states of China or China's BRI trading partners will increase Chinese merchandise import by an amount range of from 5.5 percent to 32.9 per cent. This range is much wider than that of our basic model which is from 5.8 per cent to 20.7 per cent. Moreover, the non-state visits produce insignificant positive impact on China's merchandise imports. Those findings could lead to the conclusions that state visits are much more practically important than non-state visits. Also, the non-state visits if being taken into consideration with the impact of state visits, do have impact on trade as our basic model's results, and do not otherwise.

Finally, our model can predict the dependent variable with around 43 per cent to 52 per cent fitness of the dataset.

5.2.3 The extended model with China's state visits and China's non- state visits variables:

To understand the impacts of different categories of visits by Chinese leaders, the next model will substitute "state visits a year" and "non-state visits a year " variables by "number of China's state visits a year" and "number of China's non-state visits a year". As previous models, the authors still employ OLS, FE, RE, and 2SLS. Regression results are presented in the Table 8.

Table 8: Regression results of the extended model of the equation 2.6

VARIABLES	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen
	(OLS)		(FE)		(RE)		(2SLS)
LnDistance	-1.207***	-1.201***			-1.207***	-1.201***	-1.409***
	(0.29)	(0.29)			(0.31)	(0.31)	(0.39)
Ln(Area*Area)	0.674***	0.673***			0.674***	0.673***	0.753***
	(0.10)	(0.10)			(0.08)	(0.08)	(0.20)
Landlockedness	-0.593**	-0.591**			-0.593	-0.591	-0.596**
	(0.30)	(0.30)			(0.38)	(0.38)	(0.26)
Number of China state visits a year		*0.0847*		*0.0719*		*0.0847*	*0.212*
		(0.06)		(0.06)		(0.06)	(0.27)
Number of China non-state visits a year		*-0.0555*		*-0.0337*		*-0.0555*	*0.283*
		(0.09)		(0.17)		(0.17)	(0.67)
Constant	-4.735	-4.752	3.607***	3.594***	-4.735	-4.752	-4.761**
	(4.03)	(4.03)	(0.04)	(0.04)	(3.24)	(3.25)	(2.19)
Observations	534	534	534	534	534	534	356
R-squared	0.52	0.521	0.065	0.068	0.52	0.521	0.408
Adj R-squared	0.52	0.52	0.06	0.06	0.52	0.52	0.40

Robust standard errors in parentheses

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

The findings of this model are similar to previous ones with variables of LnDistance, LnArea*Area, Landlockedness. Regarding visits by Chinese leaders at both levels, there is no relations between those trips and China's merchandise imports from the BRI countries. Those results fail to meet my expectations.

The model can predict the dependent variable with around 40 per cent to 52 per cent fitness of the dataset.

5.2.5 The extended model with the BRI's state visits and the BRI's non- state visits variables:

To understand the impacts of different categories of visits by the BRI leaders, the next model will employ "number of the BRI's state visits a year" and "number of the BRI's non-state visits a year". As previous models, the author still employ OLS, FE, RE, and 2SLS.

The findings of equation 2.7 are similar to previous ones with variables of LnDistance, LnArea*Area, Landlockedness. Regarding visits by the BRI's leaders, there is only significant evidence for positive impacts of state visits by the BRI's heads of states toward China's imports. In details, every visit by the BRI's heads of states increases its merchandise exports to China by 39.1 per cent during the research period. This conclusion meets the author's expectations. The model can predict the dependent variable with around 44 per cent to 52 per cent fitness of the dataset.

Regression results are presented in the Table 9.

Table 9: Regression results of the extended model of the equation 2.7

VARIABLES	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen
	(OLS)		(FE)		(RE)		(2SLS)
LnDistance	-1.207***	-1.196***			-1.207***	-1.196***	-1.368***
	(0.29)	(0.29)			(0.31)	(0.30)	(0.37)
Ln(Area*Area)	0.674***	0.673***			0.674***	0.673***	0.730***
	(0.10)	(0.10)			(0.08)	(0.08)	(0.19)
Landlockedness	-0.593**	-0.597**			-0.593	-0.597	-0.601**
	(0.30)	(0.30)			(0.38)	(0.37)	(0.25)
Number of the BRI state visits a year		*0.0435*	*0.0364*			*0.0435*	*0.391**￼*
		(0.04)	(0.04)			(0.04)	(0.19)
Number of the BRI non- state visits a year		0.0556	0.0643			0.0556	0.0547
		(0.05)	(0.04)			(0.04)	(0.16)
Constant	-4.735	-4.801	3.607***	3.592***	-4.735	-4.801	-4.686**
	(4.03)	(4.02)	(0.04)	(0.05)	(3.24)	(3.14)	(2.09)
Observations	534	534	534	534	534	534	356
R-squared	0.52	0.522	0.065	0.071	0.52	0.522	0.453
Adj R-squared	0.52	0.52	0.06	0.06	0.52	0.52	0.44

Robust standard errors in parentheses

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

5.2.6 The extended model with the China's state visits and the BRI's state visits variables:

To understand the impacts of state visits by Chinese leaders and their counterparts, the next model of equation 2.8 will employ "number of China's state visits a year" and "number of the BRI's state visits a year". As previous models, the authors still employ OLS, FE, RE, and 2SLS.

The findings of equation 2.8 are similar to previous ones with variables of LnDistance, LnArea*Area, Landlockedness. Regarding state visits by China's leaders and their BRI counterparts, there is only significant evidence for positive impacts of state visits by the BRI's heads of states toward China's imports.

In details, every state visit by the BRI's heads of states increases its merchandise exports to China by 38.8 per cent during the research period. This conclusion meets the author's

expectations. However, there is no evidence to prove that China's state visits can boost China's merchandise imports from the BRI countries. The model can predict the dependent variable with around 44 per cent to 52 per cent fitness of the dataset.

Regression results are presented in the Table 10.

Table 10: Regression results of the extended model of the equation 2.8

VARIABLES	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen
	(OLS)		(FE)		(RE)		(2SLS)
LnDistance	-1.207***	-1.200***			-1.207***	-1.200***	-1.363***
	(0.29)	(0.29)			(0.31)	(0.30)	(0.37)
Ln(Area*Area)	0.674***	0.673***			0.674***	0.673***	0.731***
	(0.10)	(0.10)			(0.08)	(0.08)	(0.19)
Landlockedness	-0.593**	-0.593**			-0.593	-0.593	-0.598**
	(0.30)	(0.30)			(0.38)	(0.37)	(0.25)
Number of China's state visits a year		0.0919		0.0786		0.0919	0.195
		(0.06)		(0.06)		(0.06)	(0.25)
Number of the BRI state visits a year		*0.0441*		*0.0363*		*0.0441*	*0.388**￼*
		(0.04)		(0.04)		(0.04)	(0.19)
Constant	-4.735	-4.764	3.607***	3.582***	-4.735	-4.764	-4.772**
	(4.03)	(4.02)	(0.04)	(0.05)	(3.24)	(3.14)	(2.11)
Observations	534	534	534	534	534	534	356
R-squared	0.52	0.522	0.065	0.069	0.52	0.522	0.451
Adj R-Squared	0.52	0.52	0.06	0.06	0.52	0.52	0.44

Robust standard errors in parentheses

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

5.2.7 The extended model with the China's non-state visits and the BRI's non-state visits variables:

To understand the impacts of non-state visits by Chinese leaders and their counterparts, the next model of equation 2.8 will employ "number of China's non-state visits a year" and "number of the BRI's non-state visits a year". As being performed in previous models, the author still employs OLS, FE, RE, and 2SLS.

The findings of this model are similar to previous ones with variables of LnDistance, LnArea*Area, Landlockedness. Regarding non state visits by both Chinese leaders and their counterparts in the BRI, the results find that there are no relations between those trips and China's merchandise imports from the BRI countries. Those results meet the author's expectations because of the importance of state visits than ceremonial ones.

The model can predict the dependent variable with around 40 per cent to 52 per cent fitness of the dataset.

Regression results are presented in the Table 11.

Table 11: Regression results of the extended model of the equation 2.9

VARIABLES	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen	LnEx-Propen
	(OLS)		(FE)		(RE)		(IV)
LnDistance	-1.207***	-1.197***			-1.207***	-1.197***	-1.418***
	(0.29)	(0.29)			(0.31)	(0.31)	(0.40)
Ln(Area*Area)	0.674***	0.673***			0.674***	0.673***	0.753***
	(0.10)	(0.10)			(0.08)	(0.08)	(0.20)
Landlockedness	-0.593**	-0.595**			-0.593	-0.595	-0.599**
	(0.30)	(0.30)			(0.38)	(0.39)	(0.26)
Number of China's non-state visits a year		*-0.079*		*-0.0595*		*-0.079*	*0.234*
		(0.10)		(0.17)		(0.17)	(0.67)
Number of the BRI non-state visits a year		*0.0525*		*0.0615*		*0.0525*	*0.0258*
		(0.05)		(0.04)		(0.04)	(0.17)
Constant	-4.735	-4.79	3.607***	3.604***	-4.735	-4.79	-4.691**
	(4.03)	(4.03)	(0.04)	(0.04)	(3.24)	(3.27)	(2.18)
Observations	534	534	534	534	534	534	356
R-squared	0.52	0.521	0.065	0.069	0.52	0.521	0.409
Adj R-squared	0.52	0.52	0.06	0.06	0.52	0.52	0.40

Robust standard errors in parentheses

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

5.3 Checking for the fixed effect or random effect with the models

In order to test the appropriateness of fixed effect or random effect models, the author perform the Hausman Test with "sigmamore" function. The p-value of Chi2 which is around 0.75 allows us to reject the null hypothesis. In other words, fixed effect in my basic model better fits the dataset.

Similar results are yielded for Hausman tests for equations 2.5, 2.7, 2.8 and 2.5. The Hausman test' result for equation 2.6 informs that we cannot reject the null hypothesis that random effect is an appropriate choice for this extended model.

Chapter 6: Conclusions

In this chapter, the author will discuss key variables of interest and notable regression results. The variable of interest is visits by heads of states which is classified in state level and non-state level trips. The results are also presented in accordance with the performers of these trips which could convey different statistic messages. The next parts of this chapter will be about implications for countries, especially the BRI excluding China; and possible future research angles related to the topic.

6.1 Variables of interest and key findings

With an aim at investigating the relationship between economic diplomacy and China's merchandise import from the BRI countries, the research paper has managed to employ different methodologies including OLS, FE, RE and 2SLS methods of regression. The results show that there is much interests in the instruments for economic diplomacy – visits by heads of states as presented in the Table 12 as follows:

Table 12: Variables of interest

VARIABLES	LnExPropen (OLS)	LnExPropen (FE)	LnExPropen (RE)	LnExPropen (2SLS)
Number of total visits a year	**0.0586***	**0.0568****	**0.0586****	**0.207***
Number of state visits a year	**0.0645***	**0.0551**	**0.0645***	**0.329****
Number of non-state visits a year	0.0513	0.0589	0.0513	0.0541
Number of China's state visits a year	0.0847	0.0719	0.0847	0.212
Number of China's non-state visits a year	-0.0555	-0.0337	-0.0555	0.283
Number of the BRI's state visits a year	**0.0435**	**0.0364**	**0.0435**	**0.391****
Number of the BRI's non-state visits a year	0.0556	0.0643	0.0556	0.0547
Number of China's state visits a year	0.0919	0.0786	0.0919	0.195
Number of the BRI's state visits a year	**0.0441**	**0.0363**	**0.0441**	**0.388****
Number of China's non-state visits a year	-0.079	-0.0595	-0.079	0.234
Number of the BRI's non-state visits a year	0.0525	0.0615	0.0525	0.0258

Robust standard errors in parentheses

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

Regarding the main variables, in general, the author finds that impacts of the "visits by heads of states" change slightly in terms of size of impacts while the sign of impact remains stable though different regression methods with different instruments. Also, there is an

improvement of the quality of regression results if we apply fixed effects controlling and causality treatments.

In details, there is a consistent evidence that visits by heads of states have overall significantly positive impacts on bilateral trade between China and its partners under the BRI. In other words, each visit a year in general could increase China's merchandise imports an amount of from 5.8 per cent to 20.7 per cent. Each state visit a year could increase the BRI's countries' merchandise export to China an amount of from 6.5 per cent to 32.9 per cent. Each state visit by leaders of the BRI (excluding China) could increase China's merchandise imports from the BRI's partners an amount of around 39.1 per cent. The research's findings are well in line with that of Nitsch (2007) but the size is much larger.

The results are yielded at 90 per cent and 95 per cent of significant confidences. With the treatment of causality by using lagged one of growth rate of dependent variables as instruments under the scheme of 2SLS, the regressions yield better results with higher significant levels, to 95 per cent of confidence, except the basic model of equation 2.4. The improvement could implicitly indicate the causality between economic diplomacy, and this finding is consistent with the assumptions of Moons et al. (2017).

In summary, all models' regressions allow the author to give the answers for the main research question and sub-questions of (1), (2), (4), (5). The author can also find no significantly statistic evidences for answering sub-questions (3) and (6).

With those results aforementioned, the author realizes that economic diplomacy does help increase bilateral trade within the BRI. The findings are well in line with those of (Moons, 2012; Gil-Pareja *et al.*, 2015). However, the magnitude of impact varies between types and sides of countries. In other words, the state visits in general and state visits by China's BRI partners have significant impacts other than non-state visits and China's state visits.

It is possible to say that the non-state visits themselves cannot make a concrete contributions to the BRI trades; however, when they are grouped with state visits, meanings that there is a close connection between state visits and non-state visits made by heads of states, things will be better for all countries. That is also a common conduct in international economic diplomacy, especially in the positions of non-China BRI countries.

6.2 Policy implications

Nowadays, the fast progress of global trade patterns, the increasing uncertainty over the world and trade war between the world economic power have opened new doors for the studies of economic diplomacy. With limitations, the research paper still contributes to the literature that economic diplomacy has significantly positive impacts on international trade within the context of China's Belt and Road Initiatives. Three cases of outliers, including Laos, Russia and Kazakhstan in our data also prove well this arguments with the high frequency of visits together with the high levels of export to China.

The significant results of state visits in general and the BRIs' state visits in particular can give readers some implications in policies making. It is quite feasible and important for countries under the BRI to utilize the impact of state visits to improve trade, which in turn can help achieve their development targets. This approach is found by the research paper's models to be more important with non-China BRI members.

6.3 Future researches

The importance of Global South has increasingly attracted the economic academia. This develops parallelly with the emergence of China economically and diplomatically.

Therefore, the research of economic diplomacy related to China is a promising area in the coming years.

My research paper is limited to the scale of visits categorized into two groups and the author only studies the impact on China's import. Although some findings are significant, the author believes that there will be much more academic aspects to deal with this topic as follows.

Firstly, future researches can focus on impacts of economic diplomacy on trade, export of China rather only import of China as in the papers. Moreover, two-way foreign direct investment is another interesting topic within the BRI for researchers.

Secondly, future studies can examine specific types of visits by heads of states and/or other instruments for economic diplomacy such as embassies, (general)-consulates, export promotion offices or agencies, etc. within the BRI. These approaches are promising for excavating the impacts of working levels of diplomacy on trade under this initiative.

Thirdly, due to the fact that the dataset is short, the author cannot apply the Granger test for causality between economic diplomacy and trade. The author can only base on the findings of Moons et al. (2017) and applies his methods to treat the causality. This aspect can be a future research area with better way to detect the causality directions as well as solutions for this problems.

Fourthly, the influential competition between China and other international economic powers such as the United States of America, European Union can be factors that can influence the impacts of economic diplomacy on bilateral trade between countries under the BRI. Also, the institutional similarity and/or level of development, such as the case of Laos, Russia and Kazakhstan are special factors which need to be examined in future studies.

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Appendix 1 – Raw Data on visits by heads of states under the BRI

(Source: Author's calculations and categorizations based on information published at at https://www.fmprc.gov.cn/mfa_eng/, at the sub-page of "Countries and Regions", accessed May 07 2019)

No	Country Name	Year	Month	Direction	Region	Person in Charge	Level of Visit
1	Afghanistan	2018	June	AFG-CHN	Asia	President	Non-state
2	Afghanistan	2016	May	AFG-CHN	Asia	Prime Minister	State
3	Afghanistan	2015	December	AFG-CHN	Asia	Prime Minister	Non-state
4	Afghanistan	2014	October	AFG-CHN	Asia	President	State
5	Afghanistan	2014	May	AFG-CHN	Asia	President	Non-state
6	Bahrain	2013	September	BAH-CHN	Asia	President	State
7	Bangladesh	2016	October	CHN-BAN	Asia	President	State
8	Bangladesh	2014	November	BAN-CHN	Asia	President	Non-state
9	Bangladesh	2014	June	BAN-CHN	Asia	Prime Minister	State
10	Brunei	2018	November	CHN-BRU	Asia	President	State
11	Brunei	2017	September	BRU-CHN	Asia	President	State
12	Brunei	2014	November	BRU-CHN	Asia	President	Non-state
13	Brunei	2013	October	CHN-BRU	Asia	Prime Minister	State
14	Brunei	2013	April	BRU-CHN	Asia	President	State
15	Cambodia	2018	January	CHN-CAM	Asia	Prime Minister	State
16	Cambodia	2017	May	CAM-CHN	Asia	Prime Minister	State
17	Cambodia	2017	March	CAM-CHN	Asia	King	Non-state
18	Cambodia	2016	October	CHN-CAM	Asia	President	State
19	Cambodia	2016	June	CAM-CHN	Asia	King	State
20	Cambodia	2016	March	CAM-CHN	Asia	Prime Minister	Non-state
21	Cambodia	2015	October	CAM-CHN	Asia	Prime Minister	Non-state
22	Cambodia	2015	August	CAM-CHN	Asia	King	Non-state
23	Cambodia	2014	November	CAM-CHN	Asia	Prime Minister	Non-state
24	Cambodia	2014	September	CAM-CHN	Asia	King	Non-state
25	Cambodia	2014	May	CAM-CHN	Asia	Prime Minister	Non-state
26	Cambodia	2013	April	CAM-CHN	Asia	Prime Minister	State
27	India	2018	June	IND-CHN	Asia	Prime Minister	Non-state
28	India	2018	April	IND-CHN	Asia	Prime Minister	Non-state
29	India	2017	September	IND-CHN	Asia	Prime Minister	Non-state
30	India	2016	May	IND-CHN	Asia	President	State
31	India	2016	October	CHN-IND	Asia	President	Non-state
32	India	2016	September	IND-CHN	Asia	Prime Minister	Non-state
33	India	2015	May	IND-CHN	Asia	Prime Minister	State
34	India	2014	September	CHN-IND	Asia	President	State
35	India	2013	May	CNH-IND	Asia	Prime Minister	State
36	India	2013	October	IND-CHN	Asia	Prime Minister	State
37	Indonesia	2018	May	CHN-INA	Asia	Prime Minister	State
38	Indonesia	2017	May	INA-CHN	Asia	President	Non-state
39	Indonesia	2016	September	INA-CHN	Asia	President	Non-state
40	Indonesia	2015	April	CHN-INA	Asia	President	Non-state

41	Indonesia	2015	March	INA-CHN	Asia	President	State
42	Indonesia	2014	November	INA-CHN	Asia	President	Non-state
43	Indonesia	2013	October	CHN-INA	Asia	President	State
44	Iran	2018	June	IRA-CHN	Asia	President	Non-state
45	Iran	2016	January	CHN-IRA	Asia	President	State
46	Iran	2016	May	IRA-CHN	Asia	President	State
47	Iraq	2015	December	IRQ-CHN	Asia	Prime Minister	State
48	Israel	2017	March	ISR-CHN	Asia	Prime Minister	State
49	Israel	2014	April	ISR-CHN	Asia	President	State
50	Jordan	2015	September	JOR-CHN	Asia	President	State
51	Jordan	2013	September	JOR-CHN	Asia	President	State
52	Kazakhstan	2018	November	KAZ-CHN	Asia	Prime Minister	Non-state
53	Kazakhstan	2018	June	KAZ-CHN	Asia	President	State
54	Kazakhstan	2017	June	CHN-KAZ	Asia	President	State
55	Kazakhstan	2017	May	KAZ-CHN	Asia	President	Non-state
56	Kazakhstan	2016	September	KAZ-CHN	Asia	President	Non-state
57	Kazakhstan	2016	November	CHN-KAZ	Asia	Prime Minister	State
58	Kazakhstan	2015	December	KAZ-CHN	Asia	Prime Minister	State
59	Kazakhstan	2015	May	CHN-KAZ	Asia	President	State
60	Kazakhstan	2015	August	KAZ-CHN	Asia	President	State
61	Kazakhstan	2015	March	KAZ-CHN	Asia	Prime Minister	Non-state
62	Kazakhstan	2015	December	KAZ-CHN	Asia	Prime Minister	State
63	Kazakhstan	2014	May	KAZ-CHN	Asia	President	State
64	Kazakhstan	2014	December	CHN-KAZ	Asia	Prime Minister	State
65	Kazakhstan	2013	September	CHN-KAZ	Asia	President	State
66	Kazakhstan	2013	April	KAZ-CHN	Asia	President	Non-state
67	Korea	2017	December	KOR-CHN	Asia	President	State
68	Korea	2016	September	KOR-CHN	Asia	President	Non-state
69	Korea	2016	June	KOR-CHN	Asia	Prime Minister	Non-state
70	Korea	2015	September	KOR-CHN	Asia	President	Non-state
71	Korea	2015	October	CHN-KOR	Asia	Prime Minister	State
72	Korea	2014	October	KOR-CHN	Asia	President	Non-state
73	Korea	2014	July	CHN-KOR	Asia	President	State
74	Korea	2014	April	KOR-CHN	Asia	Prime Minister	Non-state
75	Korea	2013	June	KOR-CHN	Asia	President	State
76	Kuwait	2018	July	KUW-CHN	Asia	President	State
77	Kuwait	2014	June	KUW-CHN	Asia	Prime Minister	State
78	Kyrgyzstan	2018	June	KYR-CHN	Asia	President	State
79	Kyrgyzstan	2017	May	KYR-CHN	Asia	Prime Minister	Non-state
80	Kyrgyzstan	2017	January	KYR-CHN	Asia	Prime Minister	Non-state
81	Kyrgyzstan	2016	November	CHN-KYR	Asia	Prime Minister	State
82	Kyrgyzstan	2015	December	KYR-CHN	Asia	Prime Minister	Non-state
83	Kyrgyzstan	2015	September	KYR-CHN	Asia	President	Non-state
84	Kyrgyzstan	2014	May	KYR-CHN	Asia	President	State
85	Kyrgyzstan	2013	September	CHN-KYR	Asia	President	State

86	Kyrgyzstan	2016	June	KYR-CHN	Asia	Prime Minister	Non-state
87	Laos	2018	May	LAO-CHN	Asia	President	Non-state
88	Laos	2017	November	CHN-LAO	Asia	President	State
89	Laos	2017	May	LAO-CHN	Asia	President	Non-state
90	Laos	2016	December	LAO-CHN	Asia	Prime Minister	Non-state
91	Laos	2016	May	LAO-CHN	Asia	President	State
92	Laos	2016	November	LAO-CHN	Asia	Prime Minister	State
93	Laos	2016	September	CHN-LAO	Asia	Prime Minister	State
94	Laos	2016	March	LAO-CHN	Asia	Prime Minister	Non-state
95	Laos	2015	August	LAO-CHN	Asia	President	Non-state
96	Laos	2014	November	LAO-CHN	Asia	President	Non-state
97	Laos	2014	July	LAO-CHN	Asia	President	Non-state
98	Laos	2014	April	LAO-CHN	Asia	Prime Minister	State
99	Laos	2013	September	CHN-LAO	Asia	President	State
100	Malaysia	2017	May	MAL-CHN	Asia	President	Non-state
101	Malaysia	2016	November	MAL-CHN	Asia	President	State
102	Malaysia	2015	March	MAL-CHN	Asia	President	Non-state
103	Malaysia	2015	November	CHN-MAL	Asia	Prime Minister	State
104	Malaysia	2014	November	MAL-CHN	Asia	Prime Minister	Non-state
105	Malaysia	2014	May	MAL-CHN	Asia	President	State
106	Malaysia	2014	September	MAL-CHN	Asia	Prime Minister	Non-state
107	Malaysia	2013	October	CHN-MAL	Asia	President	State
108	Maldives	2017	December	MAV-CHN	Asia	President	State
109	Maldives	2014	September	CHN-MAV	Asia	President	State
110	Maldives	2014	August	MAV-CHN	Asia	President	Non-state
111	Mongolia	2018	June	MON-CHN	Asia	President	Non-state
112	Mongolia	2018	April	MON-CHN	Asia	Prime Minister	State
113	Mongolia	2016	July	CHN-MON	Asia	Prime Minister	State
114	Mongolia	2015	November	MON-CHN	Asia	President	State
115	Mongolia	2015	September	MON-CHN	Asia	President	Non-state
116	Mongolia	2015	December	MON-CHN	Asia	Prime Minister	Non-state
117	Mongolia	2014	November	MON-CHN	Asia	President	Non-state
118	Mongolia	2014	August	MON-CHN	Asia	President	State
119	Mongolia	2014	May	MON-CHN	Asia	President	Non-state
120	Mongolia	2013	October	MON-CHN	Asia	Prime Minister	State
121	Myanmar	2017	May	MYR-CHN	Asia	President	Non-state
122	Myanmar	2017	April	MYR-CHN	Asia	Prime Minister	State
123	Myanmar	2016	August	MYR-CHN	Asia	President	State
124	Myanmar	2015	September	MYR-CHN	Asia	Prime Minister	Non-state
125	Myanmar	2014	November	MYR-CHN	Asia	Prime Minister	Non-state
126	Myanmar	2014	November	CHN-MYR	Asia	Prime Minister	State
127	Myanmar	2014	June	MYR-CHN	Asia	President	Non-state
128	Myanmar	2013	April	MYR-CHN	Asia	Prime Minister	State
129	Nepal	2018	June	NEP-CHN	Asia	Prime Minister	State
130	Nepal	2017	March	NEP-CHN	Asia	Prime Minister	State

131	Nepal	2016	March	NEP-CHN	Asia	Prime Minister	State
132	Nepal	2015	March	NEP-CHN	Asia	President	Non-state
133	Pakistan	2018	June	PAK-CHN	Asia	President	Non-state
134	Pakistan	2018	April	PAK-CHN	Asia	Prime Minister	State
135	Pakistan	2017	May	PAK-CHN	Asia	Prime Minister	Non-state
136	Pakistan	2015	December	PAK-CHN	Asia	President	Non-state
137	Pakistan	2015	September	PAK-CHN	Asia	President	Non-state
138	Pakistan	2015	April	CHN-PAK	Asia	President	State
139	Pakistan	2014	November	PAK-CHN	Asia	Prime Minister	State
140	Pakistan	2014	April	PAK-CHN	Asia	Prime Minister	Non-state
141	Pakistan	2014	May	PAK-CHN	Asia	President	Non-state
142	Pakistan	2013	July	PAK-CHN	Asia	Prime Minister	State
143	Pakistan	2013	May	CHN-PAK	Asia	Prime Minister	State
144	Palestine	2017	July	PAL-CHN	Asia	President	State
145	Palestine	2013	May	PAL-CHN	Asia	President	State
146	Philippines	2018	November	CHN-PHI	Asia	President	State
147	Philippines	2018	April	PHI-CHN	Asia	President	State
148	Philippines	2017	November	CHN-PHI	Asia	Prime Minister	State
149	Philippines	2017	May	PHI-CHN	Asia	President	Non-state
150	Philippines	2016	October	PHI-CHN	Asia	President	State
151	Qatar	2014	November	QAR-CHN	Asia	President	State
152	Saudi Arabia	2017	March	SAU-CHN	Asia	President	State
153	Saudi Arabia	2016	January	CHN-SAU	Asia	President	State
154	Singapore	2018	April	SIN-CHN	Asia	Prime Minister	State
155	Singapore	2017	September	SIN-CHN	Asia	Prime Minister	State
156	Singapore	2017	September	SIN-CHN	Asia	President	Non-state
157	Singapore	2015	November	CHN-SIN	Asia	President	State
158	Singapore	2015	July	SIN-CHN	Asia	President	State
159	Singapore	2014	November	SIN-CHN	Asia	Prime Minister	Non-state
160	Singapore	2013	August	SIN-CHN	Asia	Prime Minister	State
161	Sri Lanka	2017	May	SRI-CHN	Asia	President	Non-state
162	Sri Lanka	2016	April	SRI-CHN	Asia	Prime Minister	State
163	Sri Lanka	2015	March	SRI-CHN	Asia	President	State
164	Sri Lanka	2014	September	CHN-SRI	Asia	President	State
165	Sri Lanka	2014	May	SRI-CHN	Asia	President	Non-state
166	Sri Lanka	2013	May	SRI-CHN	Asia	President	State
167	Tajikistan	2018	June	TAJ-CHN	Asia	President	Non-state
168	Tajikistan	2017	August	TAJ-CHN	Asia	President	State
169	Tajikistan	2016	November	TAJ-CHN	Asia	Prime Minister	Non-state
170	Tajikistan	2015	September	TAJ-CHN	Asia	President	Non-state
171	Tajikistan	2015	December	TAJ-CHN	Asia	Prime Minister	Non-state
172	Tajikistan	2014	November	TAJ-CHN	Asia	President	Non-state
173	Tajikistan	2014	September	CHN-TAJ	Asia	President	State
174	Tajikistan	2014	May	TAJ-CHN	Asia	President	Non-state
175	Thailand	2017	September	THD-CHN	Asia	Prime Minister	Non-state

176	Thailand	2016	September	THD-CHN	Asia	Prime Minister	Non-state
177	Thailand	2014	December	THD-CHN	Asia	Prime Minister	State
178	Thailand	2014	November	THD-CHN	Asia	Prime Minister	Non-state
179	Thailand	2013	October	CHN-THD	Asia	Prime Minister	State
180	Timor Leste	2015	September	TIM-CHN	Asia	President	Non-state
181	Timor Leste	2014	April	TIM-CHN	Asia	Prime Minister	State
182	Turkmenistan	2014	May	TUR-CHN	Asia	President	State
183	Turkmenistan	2013	September	CHN-TUR	Asia	President	State
184	UAE	2018	July	CHN-UAE	Asia	President	State
185	UAE	2015	December	UAE-CHN	Asia	President	State
186	Uzbekistan	2018	June	UZB-CHN	Asia	President	Non-state
187	Uzbekistan	2017	May	UZB-CHN	Asia	President	State
188	Uzbekistan	2016	June	CHN-UZB	Asia	President	State
189	Uzbekistan	2015	September	UZB-CHN	Asia	President	Non-state
190	Uzbekistan	2014	August	UZB-CHN	Asia	President	State
191	Uzbekistan	2014	May	UZB-CHN	Asia	President	Non-state
192	Uzbekistan	2013	September	CHN-UZB	Asia	President	State
193	Uzbekistan	2013	November	CHN-UZB	Asia	Prime Minister	Non-state
194	Vietnam	2018	November	VIE-CHN	Asia	Prime Minister	Non-state
195	Vietnam	2017	November	CHN-VIE	Asia	President	State
196	Vietnam	2017	May	VIE-CHN	Asia	President	Non-state
197	Vietnam	2016	September	VIE-CHN	Asia	Prime Minister	State
198	Vietnam	2015	November	CHN-VIE	Asia	President	State
199	Vietnam	2015	September	VIE-CHN	Asia	President	Non-state
200	Vietnam	2015	April	VIE-CHN	Asia	President	State
201	Vietnam	2014	November	VIE-CHN	Asia	President	Non-state
202	Vietnam	2013	June	VIE-CHN	Asia	President	State
203	Vietnam	2013	October	CHN-VIE	Asia	Prime Minister	State
204	Yemen	2013	November	YEM-CHN	Asia	President	State
205	Albania	2015	November	ALB-CHN	Europe	Prime Minister	Non-state
206	Albania	2014	September	ALB-CHN	Europe	Prime Minister	Non-state
207	Armenia	2015	March	ARM-CHN	Europe	President	State
208	Armenia	2015	September	ARM-CHN	Europe	President	Non-state
209	Austria	2018	April	AUS-CHN	Europe	President	State
210	Austria	2016	April	AUS-CHN	Europe	Prime Minister	State
211	Austria	2015	March	AUS-CHN	Europe	President	State
212	Azerbaijan	2015	December	AZE-CHN	Europe	President	State
213	Azerbaijan	2014	May	AZE-CHN	Europe	President	Non-state
214	Belarus	2017	May	BEL-CHN	Europe	President	Non-state
215	Belarus	2016	September	BEL-CHN	Europe	President	State
216	Belarus	2015	September	BEL-CHN	Europe	President	Non-state
217	Belarus	2015	May	CHN-BEL	Europe	President	State
218	Belarus	2014	January	BEL-CHN	Europe	Prime Minister	State
219	Belarus	2013	July	BEL-CHN	Europe	President	State
220	Bosnia and Herzegovina	2015	September	BOZ-CHN	Europe	President	Non-state

221	Bosnia and Herzegovina	2015	November	BOZ-CHN	Europe	Prime Minister	Non-state
222	Bulgaria	2018	July	CHN-BUL	Europe	Prime Minister	State
223	Bulgaria	2015	November	BUL-CHN	Europe	Prime Minister	Non-state
224	Bulgaria	2014	January	BUL-CHN	Europe	President	State
225	Croatia	2015	October	CRO-CHN	Europe	President	State
226	Czech Republic	2018	November	CZE-CHN	Europe	President	Non-state
227	Czech Republic	2017	May	CZE-CHN	Europe	President	Non-state
228	Czech Republic	2016	March	CHN-CZE	Europe	President	State
229	Czech Republic	2015	November	CZE-CHN	Europe	Prime Minister	State
230	Czech Republic	2015	September	CZE-CHN	Europe	President	Non-state
231	Czech Republic	2014	October	CZE-CHN	Europe	President	State
232	Estonia	2018	September	EST-CHN	Europe	President	Non-state
233	Estonia	2015	November	EST-CHN	Europe	Prime Minister	Non-state
234	Georgia	2015	September	GEO-CHN	Europe	Prime Minister	Non-state
235	Greece	2017	May	GRE-CHN	Europe	Prime Minister	Non-state
236	Greece	2016	July	GRE-CHN	Europe	Prime Minister	State
237	Greece	2014	July	CHN-GRE	Europe	President	Non-state
238	Greece	2014	June	CHN-GRE	Europe	Prime Minister	State
239	Greece	2013	May	GRE-CHN	Europe	Prime Minister	State
240	Hungary	2018	November	HUG-CHN	Europe	Prime Minister	Non-state
241	Hungary	2017	May	HUG-CHN	Europe	Prime Minister	State
242	Hungary	2017	November	CHN-HUG	Europe	Prime Minister	State
243	Hungary	2014	February	HUG-CHN	Europe	Prime Minister	State
244	Italy	2017	May	ITA-CHN	Europe	Prime Minister	Non-state
245	Italy	2017	February	ITA-CHN	Europe	President	State
246	Italy	2016	September	ITA-CHN	Europe	Prime Minister	Non-state
247	Italy	2014	October	CHN-ITA	Europe	Prime Minister	State
248	Italy	2014	June	ITA-CHN	Europe	Prime Minister	State
249	Latvia	2016	November	CHN-LAT	Europe	Prime Minister	State
250	Latvia	2015	November	LAT-CHN	Europe	Prime Minister	Non-state
251	Lithuania	2018	November	LIT-CHN	Europe	Prime Minister	Non-state
252	Luxembourg	2017	June	LUX-CHN	Europe	Prime Minister	State
253	Malta	2014	July	MAT-CHN	Europe	Prime Minister	Non-state
254	Montenegro	2015	November	MOT-CHN	Europe	Prime Minister	Non-state
255	Montenegro	2014	August	MOT-CHN	Europe	President	Non-state
256	Poland	2017	May	POL-CHN	Europe	Prime Minister	Non-state
257	Poland	2016	June	CHN-POL	Europe	President	State
258	Poland	2015	November	POL-CHN	Europe	President	State
259	Portugal	2016	October	POR-CHN	Europe	President	Non-state
260	Portugal	2014	May	POR-CHN	Europe	President	State
261	Romania	2014	September	ROM-CHN	Europe	Prime Minister	State
262	Romania	2013	November	CHN-ROM	Europe	Prime Minister	State
263	Romania	2013	July	ROM-CHN	Europe	Prime Minister	Non-state
264	Russia	2018	November	RUS-CHN	Europe	Prime Minister	Non-state
265	Russia	2018	September	CHN-RUS	Europe	President	Non-state

266	Russia	2018	June	RUS-CHN	Europe	President	State
267	Russia	2017	October	RUS-CHN	Europe	Prime Minister	State
268	Russia	2017	September	RUS-CHN	Europe	President	Non-state
269	Russia	2017	July	CHN-RUS	Europe	President	State
270	Russia	2017	May	RUS-CHN	Europe	President	Non-state
271	Russia	2017	November	CHN-RUS	Europe	Prime Minister	Non-state
272	Russia	2016	November	CHN-RUS	Europe	Prime Minister	State
273	Russia	2016	September	RUS-CHN	Europe	President	Non-state
274	Russia	2016	June	RUS-CHN	Europe	President	State
275	Russia	2015	December	RUS-CHN	Europe	Prime Minister	Non-state
276	Russia	2015	September	RUS-CHN	Europe	President	Non-state
277	Russia	2015	May	CHN-RUS	Europe	President	State
278	Russia	2014	November	RUS-CHN	Europe	President	Non-state
279	Russia	2014	May	RUS-CHN	Europe	President	State
280	Russia	2014	October	CHN-RUS	Europe	Prime Minister	State
281	Russia	2013	March	CHN-RUS	Europe	President	State
282	Slovenia	2015	November	SLO-CHN	Europe	Prime Minister	Non-state
283	Turkey	2017	May	TUK-CHN	Europe	President	Non-state
284	Turkey	2016	September	TUK-CHN	Europe	President	Non-state
285	Turkey	2015	July	TUK-CHN	Europe	President	State
286	Ukraine	2013	December	UCR-CHN	Europe	President	State
287	Bolivia	2018	June	BOL-CHN	America	President	State
288	Bolivia	2013	December	BOL-CHN	America	President	State
289	Chile	2017	May	CHI-CHN	America	President	State
290	Chile	2016	November	CHN-CHI	America	President	State
291	Chile	2015	May	CHN-CHI	America	Prime Minister	State
292	Chile	2014	November	CHI-CHN	America	President	State
293	Costa Rica	2015	January	COS-CHN	America	President	State
294	Costa Rica	2013	May	CHN-COS	America	President	State
295	Cuba	2018	November	CUB-CHN	America	President	State
296	Cuba	2016	September	CHN-CUB	America	Prime Minister	State
297	Cuba	2014	July	CHN-CUB	America	President	State
298	Cuba	2013	June	CUB-CHN	America	Prime Minister	State
299	Dominica	2013	July	DOM-CHN	America	Prime Minister	Non-state
300	Ecuador	2018	December	ECU-CHN	America	President	State
301	Ecuador	2016	November	CHN-ECU	America	President	State
302	Ecuador	2015	January	ECU-CHN	America	President	State
303	Grenada	2015	September	GED-CHN	America	Prime Minister	Non-state
304	Panama	2018	December	CHN-PAN	America	President	State
305	Panama	2017	November	PAN-CHN	America	President	State
306	Suriname	2013	June	SUR-CHN	America	President	Non-state
307	Trinidad and Tobago	2018	May	TRI-CHN	America	Prime Minister	State
308	Trinidad and Tobago	2014	February	TRI-CHN	America	Prime Minister	State
309	Trinidad and Tobago	2013	May	CHN-TRI	America	President	State
310	Uruguay	2016	October	URU-CHN	America	President	State

311	Uruguay	2013	May	URU-CHN	America	President	State
312	Venezuela	2018	September	VEN-CHN	America	President	State
313	Venezuela	2015	September	VEN-CHN	America	President	Non-state
314	Venezuela	2015	January	VEN-CHN	America	President	Non-state
315	Venezuela	2014	July	CHN-VEN	America	President	State
316	Venezuela	2013	September	VEN-CHN	America	President	State
317	Fiji	2017	May	FIJ-CHN	Oceania	Prime Minister	Non-state
318	Fiji	2015	July	FIJ-CHN	Oceania	Prime Minister	State
319	Fiji	2014	November	CHN-FIJ	Oceania	President	State
320	Fiji	2014	August	FIJ-CHN	Oceania	President	Non-state
321	Fiji	2013	May	FIJ-CHN	Oceania	Prime Minister	Non-state
322	New Zealand	2017	March	CHN-NEW	Oceania	Prime Minister	State
323	New Zealand	2016	April	NEW-CHN	Oceania	Prime Minister	State
324	New Zealand	2014	November	CHN-NEW	Oceania	President	State
325	New Zealand	2014	March	NEW-CHN	Oceania	Prime Minister	State
326	New Zealand	2013	April	NEW-CHN	Oceania	Prime Minister	State
327	Papua New Guinea	2018	November	CHN-PNG	Oceania	President	State
328	Papua New Guinea	2018	June	PNG-CHN	Oceania	Prime Minister	State
329	Papua New Guinea	2016	July	PNG-CHN	Oceania	Prime Minister	State
330	Papua New Guinea	2014	November	PNG-CHN	Oceania	Prime Minister	Non-state
331	Samoa	2018	September	SAM-CHN	Oceania	Prime Minister	Non-state
332	Tonga	2018	March	TON-CHN	Oceania	President	State
333	Tonga	2013	July	TON-CHN	Oceania	Prime Minister	Non-state
334	Vanuatu	2015	September	VAN-CHN	Oceania	Prime Minister	Non-state
335	Vanuatu	2014	August	VAN-CHN	Oceania	Prime Minister	Non-state
336	Algeria	2018	September	ALG-CHN	Africa	Prime Minister	Non-state
337	Algeria	2015	April	ALG-CHN	Africa	Prime Minister	State
338	Algeria	2015	September	ALG-CHN	Africa	President	State
339	Algeria	2013	April	ALG-CHN	Africa	President	Non-state
340	Angola	2018	September	ANG-CHN	Africa	President	Non-state
341	Angola	2015	June	ANG-CHN	Africa	President	State
342	Angola	2014	May	CHN-ANG	Africa	Prime Minister	State
343	Cameroon	2018	March	CAR-CHN	Africa	President	State
344	Cameroon	2015	June	CAR-CHN	Africa	Prime Minister	State
345	Chad	2016	September	CAD-CHN	Africa	President	Non-state
346	Chad	2015	October	CAD-CHN	Africa	President	Non-state
347	Congo Republic	2018	September	CON-CHN	Africa	President	State
348	Congo Republic	2016	July	CON-CHN	Africa	President	State
349	Congo Republic	2015	September	CON-CHN	Africa	President	Non-state
350	Congo Republic	2014	June	CON-CHN	Africa	President	State
351	Congo Republic	2013	March	CHN-CON	Africa	President	State
352	Cotê d'Ivoire	2018	September	COT-CHN	Africa	President	Non-state
353	Djibouti	2018	September	DJI-CHN	Africa	President	Non-state
354	Djibouti	2017	November	DJI-CHN	Africa	President	State
355	Djibouti	2014	August	DJI-CHN	Africa	Prime Minister	Non-state

356	Egypt	2017	September	EGY-CHN	Africa	President	Non-state
357	Egypt	2016	September	EGY-CHN	Africa	President	Non-state
358	Egypt	2016	January	CHN-EGY	Africa	President	State
359	Egypt	2015	September	EGY-CHN	Africa	President	Non-state
360	Egypt	2014	December	EGY-CHN	Africa	President	State
361	Ethiopia	2018	September	ETA-CHN	Africa	Prime Minister	State
362	Ethiopia	2017	May	ETA-CHN	Africa	Prime Minister	Non-state
363	Ethiopia	2015	September	ETA-CHN	Africa	Prime Minister	Non-state
364	Ethiopia	2014	July	ETA-CHN	Africa	President	State
365	Ethiopia	2014	May	CHN-ETA	Africa	Prime Minister	State
366	Ethiopia	2013	June	ETA-CHN	Africa	Prime Minister	State
367	Gabon	2018	September	GAB-CHN	Africa	President	Non-state
368	Gabon	2016	December	GAB-CHN	Africa	President	State
369	Gambia	2018	September	GAM-CHN	Africa	President	Non-state
370	Gambia	2017	December	GAM-CHN	Africa	President	State
371	Ghana	2018	September	GHA-CHN	Africa	President	State
372	Guinea	2018	September	GUI-CHN	Africa	President	Non-state
373	Guinea	2017	September	GUI-CHN	Africa	President	Non-state
374	Guinea	2016	November	GUI-CHN	Africa	President	State
375	Kenya	2018	November	KEN-CHN	Africa	President	Non-state
376	Kenya	2018	September	KEN-CHN	Africa	President	Non-state
377	Kenya	2017	May	KEN-CHN	Africa	President	Non-state
378	Kenya	2014	May	CHN-KEN	Africa	Prime Minister	State
379	Kenya	2018	August	KEN-CHN	Africa	President	State
380	Liberia	2018	September	LIB-CHN	Africa	President	Non-state
381	Liberia	2015	November	LIB-CHN	Africa	President	State
382	Mauritania	2015	September	MAU-CHN	Africa	President	State
383	Morocco	2018	September	MOC-CHN	Africa	Prime Minister	Non-state
384	Morocco	2016	May	MOC-CHN	Africa	President	State
385	Mozambique	2018	September	MOZ-CHN	Africa	President	Non-state
386	Mozambique	2016	October	MOZ-CHN	Africa	Prime Minister	Non-state
387	Mozambique	2016	May	MOZ-CHN	Africa	President	State
388	Mozambique	2013	May	MOZ-CHN	Africa	President	Non-state
389	Namibia	2018	September	NAM-CHN	Africa	President	Non-state
390	Namibia	2018	March	NAM-CHN	Africa	President	State
391	Namibia	2014	April	NAM-CHN	Africa	Prime Minister	State
392	Nigeria	2018	September	NIG-CHN	Africa	President	Non-state
393	Nigeria	2016	April	NIG-CHN	Africa	President	State
394	Nigeria	2014	May	CHN-NIG	Africa	Prime Minister	State
395	Nigeria	2013	July	NIG-CHN	Africa	President	State
396	Rwanda	2018	September	RWA-CHN	Africa	President	Non-state
397	Rwanda	2018	July	CHN-RWA	Africa	President	State
398	Rwanda	2017	March	RWA-CHN	Africa	President	State
399	Sierra Leone	2018	September	SIE-CHN	Africa	President	State
400	Sierra Leone	2016	December	SIE-CHN	Africa	President	State

401	Sierra Leone	2013	June	SIE-CHN	Africa	President	Non-state
402	Somalia	2018	August	SOM-CHN	Africa	President	Non-state
403	South Africa	2018	September	SOU-CHN	Africa	President	State
404	South Africa	2018	July	CHN-SOU	Africa	President	State
405	South Africa	2017	September	SOU-CHN	Africa	President	Non-state
406	South Africa	2016	September	SOU-CHN	Africa	President	Non-state
407	South Africa	2015	December	CHN-SOU	Africa	President	State
408	South Africa	2015	September	SOU-CHN	Africa	President	Non-state
409	South Africa	2014	December	SOU-CHN	Africa	President	State
410	South Africa	2013	March	CHN-SOU	Africa	President	State
411	South Sudan	2018	August	SSU-CHN	Africa	President	Non-state
412	Sudan	2018	September	SUD-CHN	Africa	President	Non-state
413	Sudan	2015	September	SUD-CHN	Africa	President	Non-state
414	Tanzania	2018	September	TAN-CHN	Africa	Prime Minister	Non-state
415	Tanzania	2014	October	TAN-CHN	Africa	President	State
416	Tanzania	2013	October	TAN-CHN	Africa	President	Non-state
417	Tanzania	2013	March	CHN-TAN	Africa	President	State
418	Togo	2018	September	TOG-CHN	Africa	President	Non-state
419	Togo	2016	May	TOG-CHN	Africa	President	State
420	Tunisia	2018	September	TUN-CHN	Africa	Prime Minister	Non-state
421	Uganda	2018	September	UGA-CHN	Africa	President	Non-state
422	Uganda	2015	March	UGA-CHN	Africa	President	State
423	Zambia	2018	September	ZAM-CHN	Africa	President	Non-state
424	Zambia	2015	March	ZAM-CHN	Africa	President	State
425	Zambia	2013	April	ZAM-CHN	Africa	President	State
426	Zimbabwe	2018	September	ZIM-CHN	Africa	President	Non-state
427	Zimbabwe	2018	April	ZIM-CHN	Africa	President	State
428	Zimbabwe	2017	January	ZIM-CHN	Africa	President	Non-state
429	Zimbabwe	2015	December	CHN-ZIM	Africa	President	State
430	Zimbabwe	2014	August	ZIM-CHN	Africa	President	State

Appendix 2: Tables of correlation matrix of independent variables

Appendix 2.1: The correlation matrix between independent variables for equation 2.5

(N=534)

	LnDis-tance	Ln(Area*Area)	Land-locked-ness	Contin-gency	Number of state visits a year	Number of non-state visits a year
LnDistance	1					
Ln(Area*Area)	0.0068	1				
Landlockedness	-0.1469	0.0587	1			
Contingency	-0.5033	0.312	0.1598	1		
Number of state visits a year	-0.2163	0.1503	0.0734	0.3289	1	
Number of non-state visits a year	-0.3099	0.2113	0.09	0.3977	0.0993	1

Appendix 2.2: The correlation matrix between independent variables for equation 2.6

(N=534)

	LnDis-tance	Ln(Area*Area)	Land-locked-ness	Contin-gency	Number of Chi-na's state visits a year	Number of Chi-na's non state visits a year
LnDistance	1					
Ln(Area*Area)	0.0068	1				
Landlockedness	-0.1469	0.0587	1			
Contingency	-0.5033	0.312	0.1598	1		
Number of China's state visits a year	-0.1909	0.1661	0.0239	0.2719	1	
Number of China's non- state visits a year	-0.1015	0.1388	0.0226	0.2307	0.0844	1

Appendix 2.3: The correlation matrix between independent variables for equation 2.7

(N=534)

	LnDis-tance	Ln(Area*Area)	Land-locked-ness	Contin-gency	Number of part-ner's state visits a year	Number of part-ner's non-state visits a year
LnDistance	1					
Ln(Area*Area)	0.0068	1				
Landlockedness	-0.1469	0.0587	1			
Contingency	-0.5033	0.312	0.1598	1		
Number of partner's state visits a year	-0.1306	0.0659	0.0747	0.2123	1	
Number of partner's non state visits a year	-0.3067	0.1927	0.0907	0.37	0.0154	1

Appendix 2.4: The correlation matrix between independent variables for equation 2.8

(N=534)

	LnDis-tance	Ln(Area*Area)	Land-locked-ness	Contin-gency	Number of Chi-na's state visits a year	Number of part-ner's state visits a year
LnDistance	1					
Ln(Area*Area)	0.0068	1				
Landlockedness	-0.1469	0.0587	1			
Contingency	-0.5033	0.312	0.1598	1		
Number of China's state visits a year	-0.1909	0.1661	0.0239	0.2719	1	
Number of partner's state visits a year	-0.1306	0.0659	0.0747	0.2123	0.0239	1

Appendix 2.5: The correlation matrix between independent variables for equation 2.9

(N=534)

	LnDis-tance	Ln(Area*Area)	Land-locked-ness	Contin-gency	Number of Chi-na's non state visits a year	Number of part-ner's non-state visits a year
LnDistance	1					
Ln(Area*Area)	0.0068	1				
Landlockedness	-0.1469	0.0587	1			
Contingency	-0.5033	0.312	0.1598	1		
Number of China's non- state visits a year	-0.1015	0.1388	0.0226	0.2307	1	
Number of partner's non state visits a year	-0.3067	0.1927	0.0907	0.37	0.1749	1