Trading environment analysis between China and CEE countries

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Abstract

Based on the background of the 16+1 Mechanism, this paper analyses trading environment between China and sixteen CEE countries from 2006 to 2016, taking consideration of the Great Recession of 2008 to 2012 and emerging approach of “Eastern Opening”. In one way, fundamental background illustrates and compares the freshest snapshot of China and CEE countries in 2016 by several key indicators. In another way, sessions on subjects of trading environment attempt to evaluate CEE countries and China’s current trade situation on five aspects through economic capability (GDP, GDP per capita, and GDP growth), trading value (value of exports and imports, trade balance), composition of trade (key products groups by SITC classification), trading environment (exchange rates, tariff rates, and FDI). In the end, profound and comprehensive proposals are raised for materializing, maximizing, optimizing bilateral trades between China and CEE countries.
1 Introduction

After experiencing dramatic economic changes after 2008 financial crisis and European debt crisis, China is facing industry upgrade while CEE is consolidating economic recovery. Hardly foresee that the two regimes with distinct backgrounds come together and generate a cooperative initiative named “the 16+1 Mechanism”. Obviously, there are so many concerns existing on this cooperation, among them three research questions are raised by me. For propose a concrete resolution to aforementioned questions, this paper analyses trading environment between China and sixteen CEE countries from 2006 to 2016, taking consideration of the Great Recession of 2008 to 2012 and emerging approach of “Eastern Opening”. In one way, fundamental background illustrates and compares the freshest snapshot of China and CEE countries in 2016 by several key indicators. In another way, sessions on subjects of trading environment attempt to evaluate CEE countries and China’s current trade situation on five aspects through economic capability, trading value, composition of trade, trading environment.

1.1 The Belt and Road Initiative

The BRI is generated from proposals of the Silk Road Economic Belt and the 21st Century Maritime Silk Road, which first came into public by two speeches of president Xi Jinping in Kazakhstan and Indonesia severally in 2013. In respective of geographical ranges, the Silk Road Economic Belt covers Central Asia while the Maritime Silk Road spans through South-East Asia and South Asia, and both depart from China and terminate
in Europe (Ministry of Foreign Affairs of the People’s Republic of China, 2013; ASEAN-China Centre, 2013). 65 participating countries from three continents have been officially announced by the BRI (details see Table 1), five from Central Asia, two East Asia countries (including China with Hong Kong and Macau as one participant), eight countries in South Asia, all ten member states of the Association of Southeast Asian Nations (hereinafter referred to as “ASEAN”) plus Timor-Leste from South East Asia, fifteen states from Middle East and North Africa, and twenty-four Central and Eastern European Countries (China International Trade Institute, 2015). The BRI is prospective as a network connecting China, Eurasia, the Middle East, Europe and Africa (Müller-Markus, 2016). These 65 countries mentioned above constitute 62.3% of population, 30% of GDP and 24% of household consumption globally (Chin & He, 2016). It is quite impressive to consider the economic significance of BRI.

Under framework of the BRI, over 40 countries and organizations have been cooperating with China by arrangements on fields of infrastructure, trade, science, education and culture, meanwhile China is active to connect the BRI with countries and associations through several initiatives, such as Eurasian Economic Union (hereinafter referred to as “EAEU”), the Master Plan (the initiative of ASEAN), the Bright Road (the initiative of Kazakhstan), the Middle Corridor (the initiative of Turkey), the Northern Powerhouse (the initiative of the UK), and so forth (Xinhua, 2017). It is worth nothing that financing mainly supported by China acts as a crucial vehicle for promoting these bilateral or multilateral plans. During the Belt and Road Forum, considerable plans of financing were
announced, for instances, RMB 100 bn to the Silk Road Fund, USD 1 bn to the Assistance Fund for South-South Cooperation for encouraging developing countries on resource and technology exchanges, RMB 380 bn to the China Development Bank and the Export-

Table 1. Participating countries of the BRI

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>East Asia</td>
<td>China, Mongolia</td>
</tr>
<tr>
<td>Southeast Asia</td>
<td>Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste, Vietnam</td>
</tr>
<tr>
<td>Central Asia</td>
<td>Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Oman, Qatar, Saudi Arabia, Palestine, Syria, United Arab Emirates, Yemen</td>
</tr>
<tr>
<td>South Asia</td>
<td>Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, Sri Lanka</td>
</tr>
<tr>
<td>Europe</td>
<td>Albania, Armenia, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Hungary, Latvia, Lithuania, Macedonia, Moldova, Montenegro, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, Turkey, Ukraine</td>
</tr>
</tbody>
</table>

Source: Data from *Industrial Cooperation between Countries along the Belt and Road*. Table from *the Belt and Road Initiative: 65 countries and beyond.*
Import Bank of China for financing infrastructure construction in Belt and Road cooperation (Xinhua, 2017). Moreover, the Asian Infrastructure Investment Bank (hereinafter referred to as “AIIB”), a new multinational financial institution, works for fulfilling financial needs of infrastructure construction in Asia. Proposed by China in 2015, the AIIB is equipped with USD 100 bn as staring capital, whose 27.5% share is from China as largest shareholder (AIIB, 2017). The capital size of AIIB has reached over twice more than the European Bank for Reconstruction and Development does (EPSC, 2015).

1.2 Sixteen CEE countries in the 16+1 Mechanism

Meanwhile out of countries participating in the BRI, sixteen Central and Eastern European countries (hereinafter referred to as “CEE countries”) are generating vigorous interactions with China under a cooperative framework named “the 16+1 Mechanism”. The 16+1 Mechanism was initiated by China in 2012 and works for enhancing connections and interactions with eleven European Union (hereinafter referred to as “EU”) members (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia) and five Balkan states (Albania, Bosnia and Herzegovina, Macedonia, Montenegro, Serbia). The framework of the 16+1 Mechanism is based on bilateral or multilateral collaboration, ranging from international commerce (agriculture, forestry, tourism), infrastructure construction (trade, investment, transport), professional sciences (finance, science, technology) and social humanities (education, culture, people-to-people exchanges). (Ministry of Foreign Affairs of the Republic of Latvia, 2017)

The 16+1 Summit has been the annual meeting for government heads of CEE countries and China to negotiate and review cooperative programs since 2012. Six participating
countries have held this summit, namely Warsaw of Poland, Bucharest of Romania, Belgrade of Serbia, Suzhou of China, Riga of Latvia, and Budapest of Hungary (Ministry of Foreign Affairs of the Republic of Latvia, 2017). During the first 16+1 Summit in Warsaw, the China’s Twelve Measures for Promoting Friendly Cooperation with Central and Eastern European Countries was launched as the framework document for the 16+1 Mechanism cooperation, and USD 10 bn special credit line was fund for fostering projects on infrastructure, technology and green economy (Ministry of Foreign Affairs of the Republic of China, 2012).

Known as “Eastern Opening”, these sixteen CEE countries turn to seek for closer economic ties with Asian economies especially China for fostering external investment and capital, after experienced severe anaemic economic growth after 2008 financial crisis and European debt crisis (NRDI Office, 2017). It is worth to pay attention that mutual economic interests and historical connections are the unique advantages of CEE countries to cultivate beneficial relationships with China. Notwithstanding CEE countries and China are keen to work together, materializing potential benefits is not an easy issue.

Based on a quantitative analysis paper done by Chen and Yang (2016), improving trade and economic cooperation between China and CEE countries should focus on political cooperation firstly, and “take the infrastructure as breakthrough”. The China-Europe Land-Sea Express Passage is one of joint-construction infrastructure project involved in the 16+1 Mechanism. As part of this project, an agreement of building 350km high-speed railway between Budapest (Hungary) to Belgrade (Serbia) was signed by Hungary and
Serbia in December of 2014. The construction of the Hungary-Serbia Railway is operated by the China Railway Group, and overall costs reach to Euro 2.5bn. And this cost is under name of the Hungarian and Serbian governments, who got financed by a loan with estimated interest rate of 2% to 2.5% from the China’s Export-Import Bank (Pinxteren, 2017). Besides, another construction plan is under process aiming to upgrade railway from the port of Rijeka to Zagreb in Croatia (Milekic, 2016). In addition, Adriatic-Baltic-Black Sea Seaport Cooperation, as one of these ongoing infrastructure projects, indicated by the *Riga Declaration* of the 16+1 Summit in 2016. This cooperation of infrastructure aims to upgrade ports and industrial parks along coast of the Adriatic, Baltic and Black Sea and inland areas (Ministry of Foreign Affairs of the Republic of Latvia, 2016).

Under the framework of the BRI, the 16+1 Mechanism is obviously full of opportunities meanwhile challenges or risks to both China and CEE. With great expectations, the BRI is regarded as the “signature initiative of Xi” (Bond, 2017) and “cornerstone of his foreign policy” (Pinxteren, 2017). Meanwhile, the BRI is commented as “the most ambitious project in geographical scope and resource available” but “the least institutionalised” compared with EU and EAEU (Bond, 2017). Since that, according to literatures related to the 16+1 Mechanism, here are two main concerns in regard to processing the 16+1 Mechanism projects. One is the feasibility of those ongoing infrastructure projects. For instance, profitability of the Hungary-Serbia Railway is a question mark, since it is hard to manage a breakeven with the daily traffic flows of 4,000 people currently (Hungarian Spectrum, 2017). And it should be indicated that mainly Hungarian government gets to
bear this potential risk once it come true. Furthermore, existing trade imbalance is the phenomenon inevitably noticed by several scholars (Müller-Markus, 2016; Mitrovic, 2017; Pinxteren, 2017). China realizes economic power as a mega exporter to the world and plays definite origin of import to these sixteen CEE countries. Two related examples could be cited here, one is that trains are full-loaded products to Warsaw from China while come back China with half empty cabins. The other one happened in 2014, forty trains were transporting Chinese products to Madrid but ultimately only eight got back to China with Spanish agriculture goods (Müller-Markus, 2016).

President Xi Jinping mentioned infrastructure is “the foundation of development through cooperation” during his speech in the Belt and Road Forum (Xinhua, 2017). A comprehensive and effective infrastructure framework connected by ports, roads and railways would facilitate transportation flows between Asia to Europe. Moreover, the following spill-over effects generated from growing trade opportunities would benefit relevant countries on enhancing economic robustness and social stability overall. Even so, how to guarantee feasibility and profitability of projects, how to overcome trade imbalance, and how to benefits all stakeholders involved in the 16+1 Mechanism? These concerns are still existing on the path of cooperation between CEE countries and China as a big question mark. “Eastern Opening” reflects strong willingness of CEE countries to seek for diversity to economic growth and economic independence instead of relying on western European countries. Nevertheless, could CEE countries take advantage of
infrastructure externalities generated by the 16+1 Mechanism, find opportunities of trade creation then boom economic benefit and generate social welfare?

As It is mentioned before, there are several voices indicate that this initiative raised by China is no more than a great plan to distribute China’s excess production then capture less developed countries into “Beijing’s economic grip” (Phillips, 2017). Even certain view appeared as the 16+1 Mechanism is a strategy to build up a “colonial enterprise” (Bagchi, 2017). Since this paper would mainly focus on the potential economic impacts that the 16+1 Mechanism would bring to CEE countries and China, I won’t spare too much contents about geographical controversies here.

As to contents following, besides this session of introduction, ongoing four sessions are framed to evaluate and analyse trading environment between China and sixteen CEE countries, pursuing materialization, optimization, maximization of bilateral trades on certain trading fields.

The second session firstly will raise the research questions, generated from the session of Introduction as the most relevant and feasible direction to work on. Later on, based on research question, certain literature reviews will contribute academic methodologies on how to process analysis and relevant hints of selecting supportive evidence.

The third session is going to illustrate analysis methodology applied by this paper, inspired by academic reviews in previous session. Meanwhile, this session will also introduce the indicators to further analysis, and criteria and source of the data. These
pivotal indicators are selected as economic interpretations of China and CEE countries, ranging from domestic status quo, production capability to trade sector.

As the most weighted out of overall contents, the fourth session will focus on analysis of trading environment of China and sixteen CEE countries. Here are five parts embedding in this session. First one is fundamental background, it aims to depict and compare necessary background of China and CEE countries, to facilitate a brief comprehension of shareholders involved in this initiative. Then part two to part five are going to connect overall information related to economic capability, trading value, composition of trade, and trading relevancy from 2006 to 2016. The part of economic capability tends to evaluate productivity related indicators, as GDP, GDP per capita and GDP growth. Trading value is the part assessing dual-direction trading performance via exports, imports and more significant components, trade balance. As to part of composition of trade, SITC nomenclature is utilized to specify investigate into groups of products. The last part but not the least, trading relevancy analysis the impacts of three critical indicators as exchange rate, tariff rate, and FDI.

The final part will embody conclusion as responses to initial research questions. It will recall corresponding backgrounds among China and CEE countries. Then relevant findings of trading environment analysis will be interpreted for materializing, maximizing, optimizing bilateral trades. Finally, profound and comprehensive proposals are expected for enhancing cooperation between China and CEE countries under the 16+1 Mechanism.
2 Research questions and theoretical background

2.1 Research questions

Generated by the introduction to economic background of the 16+1 Mechanism, several questions keep coming with respect to improve current situation of bilateral trades between CEE countries and China. Among these queries, three questions draw my utmost interest to work on, and I personally presume these three would be the most relevant and feasible one to implement further analysis and evaluation. Based on the background of the 16+1 Mechanism, the three questions are:

1. Is the 16+1 Mechanism working as a plan to distribute China’s excess production?

2. How can CEE countries optimize bilateral trading environment?

3. Will CEE countries become new manufactory of China?

My initial answers to these three questions are:

1. Yes, because China is an exporting dominant and the 16+1 Mechanism will facilitate its exports to CEE countries.

2. According to projects generated by the 16+1 Mechanism, infrastructure is definitely good way for CEE countries to expand trading flows and trading partners.

3. No, China’s products are too primary to acquire CEE markets as manufacturing sector.
However, what I understand on bilateral trades between China and CEE countries, it is far from a comprehensive view till this part. For find proper and supportive answers of above questions, this paper is going to analyse trading environment between China and sixteen CEE countries based on the 16+1 Mechanism, under the consideration of the Great Recession of 2008 to 2012 and emerging approach of “Eastern Opening”. In one way, the session of fundamental background illustrates and compares the freshest snapshot of China and CEE countries in 2016 by several key indicators, ranging from population, currency, distance, status in international institution and years of memberships. In another way, sessions on subjects of trading environment attempt to evaluate CEE countries and China’s current trade situation. Here are five aspects attempt to analyse status quo of trade conditions between CEE countries and China. Evaluation on current trade structure of respective CEE countries and China, through economic capability (GDP, GDP per capita, and GDP growth), trading value (value of exports and imports, trade balance), composition of trade (key products groups by SITC classification), trading environment (exchange rates, tariff rates, and FDI). The elaborate description of generating trading environment analysis would be illustrated in the following section of empirical analysis.

2.2 Theoretical background

On subject of evaluating and optimizing trading environment, it seems that adequate research approaches are available on this field, since substantial literatures have been working on objects to economies, countries and regions. However, frankly speaking,
Investigation on trading between China and Central and Eastern European countries, especially sixteen CEE countries, I assume it belongs to a far less study region. On one hand, numbers of scholars evaluate and analyse the economic transformation of CEE countries after the collapse of Soviet Union, especially trading relations with EU (Gros & Gonciarz, 1996; Ferragina & Pastore, 2004; Gheorghe, 2008). On the other hand, regarding to the subject of China’s trading activities, mainstream of analysis research focus on United States, EU, ASEAN and so forth typical trading partners (Vahalík, 2014; Yang & Chen, 2016).

Specializing to trade flows of CEE countries, many of papers have worked on examining potential trade volume or value of countries in Central and Eastern Europe region, especially during the period of Socialism economy transformation after collapse of Soviet Union (Gros & Gonciarz, 1996). These studies have analysed the extents of improvement and transforms would bring to Central and Eastern European economies, in connection with commodity patterns, trading partners, imports and exports value and so on. Regarding to the direction of trades, related articles focus more on external trades with Western European and EU countries especially. Rather than internal trade among the Central and Eastern European countries, CEE countries tend to trade more frequently with Western European countries after economic transaction (Gros & Gonciarz, 1996).

Moreover, as more recent topics, many scholars are evaluating the impacts of joining EU or other trading agreements to CEE countries generally or individually. The analysis of Ranilović (2017) is about merchandise trade potential of Croatia in 1998 to 2015, and
gravity model of trade is introduced to access trade value between Croatia and EU countries and neighbouring non-EU countries respectively. Economic size and distance between two trade parties, are set alongside with EU provisions, signed free trade agreements as dummy variables. These components are used to estimate trade flows of Croatian imports and exports. The results of her empirical analysis are in line with assumption of gravity model, and the 2008 financial crisis and membership of EU present as significate factors of Croatia’s external trades. However, what out of expectation is that free trade agreements haven’t facilitated Croatia’s exports. In her paper, the product of Croatian and partner country’s GDP is calculated to reflect the economic size of country-pair. Distance is gauged from Croatian capital Zagreb to partner country’s capital.

Recent years, since the BRI becomes a hot issue as emerging strategic cooperation spanning among Asia, Europe and Africa, and especially countries in region of Central and Eastern Europe get involved in the 16+1 Mechanism and propose “Eastern Opening” cooperative strategy, many scholars and research institutes begin expanding the topics related to trading relation, trading environment and trading potential between China and CEE countries. The research vacuum of trading between China and CEE countries is expected to be filled gradually. As shown above, the topic stands at cutting-edge to make a comprehensive analysis on trading environment between China and sixteen CEE countries.

Starting from classic approaches on trading analysis, massive classic theories and practical approaches have been generated. Traditional theories of international trade, such
as the Heckscher–Ohlin theorem (Ohlin, 1933), states that international trades take place as countries take advantage of endowments difference. When overviewing a country’s trading structure, initially step would take a look at two categories generated by fundamental production factors as capital and labour. Countries endowed by capital factors, as machinery or updated technology, tend to export products with margins. Returns of trades will benefits workers in these countries with high salary and social benefits. Meanwhile, for countries are abundant with labour factor, more labour-intensive goods will be produced and exported. (Ohlin, 1933)

The Heckscher–Ohlin theorem assume no price difference of homogeneous products when doing international trade. However, this assumption is inconsistent with the reality, due to transportation costs, customs regulations and various tariffs and non-tariff barriers. Trading firms face obstacles from non-tariff barriers quite frequently, such as get imposed by regulations of destinations on product standards, quality requirements, and technical criterions (Tarasov, 2011). Thus, a methodology considering effects on trading price would be more comprehensive. Subsequently, a model accounting for the effect of distance, as Tinbergen’s gravity model of trade, is introduced substantially to analyse trade activities among countries.

The gravity model of trade is used as a classic approach to analyse trade potential among two economies. Inspired by Newton’s universal gravitation theory, this model was introduced by Tinbergen in 1962 to determine the volume of trade flows of country pairs. Tinbergen (1962) explains in pair of trading countries, GNP as indicator to interpret
exporting country’s economic size, which decides a country’s capability of exporting supply. Take steps further, Anderson (1979) specified the demand side of the gravity model of trade, as introducing income variable into equation. Bergstrøm (1985) considered the effects of price fluctuations, with introduction of GDP deflators into gravity model of trade. Even though the basic gravity model of trade is recurrently introduced by researches on estimating trade phenomena (Baldwin, 1994; Frankel, Stein and Wei, 1995; Ranilović, 2017), the application of research method is always commented as lack of economic foundation (Anderson, 2016), due to impacts of time and economies selected (Mátyás, 1998), low prediction accuracy (Gros & Gonciarz, 1996) and highly uncertain estimation (Jakab, Kovács, & Oszlai, 2001). Therefore, alternatives with structured specifications, originated by the basic model with income and distance, are gradually applied by in related researches (Oguledo & MacPhee, 1994; Mátyás, 1998; Anderson, 2016).

Meanwhile, not only the gravity model of trade, considerable approaches have been utilized to evaluate trade environment among countries, regions, and transregional agreements. Here follows a brief summary of methodologies implemented by certain researches and related integrations on my research approach.

Gros and Gonciarz (1996) introduced the openness ratio and trade pattern to compare Central European countries with EU countries in 1994, to reveal whether or not the trade regimes of countries in Central Europe reach the western standards after their economic liberalization. Pairs of countries are chosen from two parties with similar population size
but different income levels. If two countries obtain similar openness ratio, which is the proportion of imports to GDP or exports to GDP, it means no trade potential for the country from Central Europe to develop.

Chen and Yang (2016) analyse business environment of sixteen CEE countries, and evaluate the level of bilateral cooperation between them and China. They implement the radar chart with selected range of dimensions, as regards to administration, macroeconomy, finance, trading, infrastructure, innovation ability and etc. In total, make comparison and draw conclusion according to results measured by radar charts of sixteen countries.

The methods of interview and questionnaire are utilized by Liu (2016), he raises questions then collected and analyses views and opinions in level of professional individual, such as policy makers, scholars, diplomats, entrepreneurs, media workers and etc. A comprehensive assessment is generated by his approach on overall environment of the BRI and the 16+1 Mechanism in CEE countries, especially in Balkan countries.

On investigation of the relation of China’s FDI with trading structure in Eastern Europe region, Yang and Chen (2016) utilize the Revealed Comparative Advantage (Hereinafter referred to as “RCA”) to determine comparative advantages of exporting activities between China and CEE countries. Then their empirical analysis is based on the measurement model of technology sophistication applied on exports products. According to their study results, sixteen CEE countries own superiority on primary products, while
China is quite specialized on labour-intensive manufactures. Moreover, CEE countries obtain comparative advantages on medium-technology products, but China is leading exports of high-technology products.

When doing empirical analysis on bilateral trades of EU, China and ASEAN, Vahalík (2014) applies to the regional trade intensity (hereinafter referred to as “RIT”) and trade complementarity index (hereinafter referred to as “TCI”). RIT reflects whether or not the volume that origin economy exports is more than the world average level of this destination economy, in another words, if the frequency of bilateral trades is over the world average. In regrading to the World Trade Organization (hereinafter referred to as “WTO”), TCI measures the extent of overlap between one country’s exports and other country’s imports (2012). If TCI is 100, it means two countries’ trades match perfectly. The estimations of trade intensity and trade complementarity determine if EU, China and ASEAN are “natural trading partners”, then the necessity to create a preferential trade agreement among observed economies in his paper.

At first, I was supposed to introduce TCI as indicator to evaluate trade environment of CEE countries and China, to see if both parties are natural trade partner or not. However, there are three obstacles to implement TCI to my research. First one is that the only data source of TCI that I tried to find is provided by database the United Nations Conference on Trade and Development (hereinafter referred to as “UNCTAD”). The available years of data is from 1995 to 2013, which can’t match the set of time period in my research. Second, due to economic size differences between China and CEE countries, as
UNCTAD indicates, high TCI is not necessary to show the actual extents of trade overlaps among two trading partners with large size difference. The last problem is the classification of products categories. UNCTAD uses SITC Revision 3 to define products groups, and the classification applied in my research is SITC Revision 4. To avoid any further ambiguity, I decide to abandon TCI and turn to several fundamental indicators related to trade, as an approach to measure trading environment of China and CEE countries.

Somehow, for further trading environment analysis, it is indeed crucial to cautiously determine essential relevant indicators affecting on trade flows between China and CEE countries. The following part is about the consideration of the effects of certain indicators on international trades flows, through reviewing approaches by other similar literatures. For instance, Helpman and Krugman (1985) indicate that, traditional trade theory is failed to pick up several important contents in intra-industry trade, such as trade composition, foreign direct investment (hereinafter referred to as “FDI”), welfare effects of liberal trade, and etc. Thus, a thorough approach on international trade should address not only trade volume, trade pattern, trade composition, but also price deflators (inflation rate and exchange rate), investment impact (FDI), transport barriers (tariff), and facilitation of trade agreements (membership of trading organizations).

About the impacts of key indicators on trade value, Jakab, Kovács, and Oszlai (2001) examine the trade potential of 53 countries from 1990 to 1997. According to their empirical analysis on trade flows from origin country to destination country, variables
own positive impacts as GDP of both countries, price level of exports by origin and imports by destination, common border and language, population of destination country, certain free trade agreements. Whilst negative effects are generated by population of origin country, bilateral exchange rate, distance. In aspect of FDI, they conclude that, varied exporting product patterns and FDI stocks and structures differed the speed of trading reorientation of Hungary, Poland and Czech among market liberalization period.

Tarasov (2011) considers that distance, border and language, and membership of free trade areas, these three aspects have the potential to result in obstacles among bilateral trades. Hence, he applies groups of datasets to show whether or not country pairs get in common free trade areas as EU or North American Trade Agreement. This dataset selection is similar as my approach, which indicates the impacts of membership status in EU and WTO in trading environment analysis.

Tarasov (2011) concludes that “richer countries trade more”, on the basic of strong positive correlation between GDP and trades value in his estimation. As for my research approach, regrading to the indicators measuring country’s economic size, not only this country’s GDP, but also GDP per capita should has been gotten consideration into the estimation of this country’s trade potential. In my view, GDP per capita obtains the function to reflect residents’ income level, purchase power even social well-being to some extents. Moreover, in case of international trade, the higher GDP per capita or national income, the more trade volume created. High income is generated by a country’s exporting supply ability, meanwhile accelerates a country’s importing demand ability.
In Tarasov (2011)’s estimation, he observes that increase a country’s income double, the trade flows will grow by 19%. And the results of his analysis show that exporting is more strongly than importing, on explaining trading flows’ dependence on exporting countries’ income level. Based on his research, exporting is more difficult for exporters from less-developed countries, as trade costs will be higher to firms operated in comparatively backward economies. This assumption as Tarasov states explains the causes of less trade flows and less trade partners. I suppose vice versa, which is exporting from more advanced economies would generate more trade flows and partners. In addition, Fieler (2011) states that trade is dependent on income level, mostly due to customers have “non-homothetic preferences” on goods in markets. Since Tarasov (2011) and Fieler (2011) provides a concrete evaluation on the elasticity of trades with GDP per capita, I realize that it would be proper to measure the extents of GDP per capita of involved countries, which are China and sixteen CEE countries in case of my research. Thus, besides population is chosen to stand for the market size of countries and importing demand, at the same time, combined with another essential indicator GDP, GDP per capita can be interpreted by both indicators to some extents.

Related articles indicate that, during the transformation of CEE economic regimes in the 1990’s, the external trades with Western Europe especially with EU countries were more essential than internal trades among CEE markets (Gros & Gonciarz, 1996). Therefore, research of my paper concentrates on external trading patterns of CEE countries rather than internal ones.
3 Methodology and data criteria

3.1 Methodology in this paper

In this paper, I mainly take the methodology of Inotai (2013) as references. Inotai (2013) investigates bilateral trading environment between China and EU countries, since China joined WTO in 2001. Both EU countries and China operate “export-oriented economic strategy”, EU is the first consumer to Chinese exports meanwhile supplies massive products to China as second supplier. He evaluates “EU-China strategic partnership” in both pre-crisis level and post-crisis level, in regards of trade volume, trade balance, trade partner, merchandise structure and so forth. Furthermore, in his article, a specified segment of trade pattern is applied as main commodity categories by Standard International Trade Classification (hereinafter referred to as “SITC”).

Therefore, considering methods applied by relevant research, there are three features of data used in my analysis of bilateral trade environment and trade potential between China and sixteen CEE countries respectively. Firstly, data selected to estimate CEE countries’ trades are range from 2006 to 2016 (in most cases, except FDI indices are not available to 2016 ones). Time scope of eleven-year functions more dynamic structure than one-year data set. Second, significant indicators are introduced into trading environment analysis, as status and history of international institutions (i.e. EU and WTO). Thus, overall analysis can take into consideration of non-typical effects on trade flows as membership of trade cooperation. Thirdly, segment trade flows into specific key product
groups under classification of the SITC nomenclature. Then estimation results become comparable and precise by disaggregated data divided into six products groups. SITC classification is helpful to figure out which product group would have much more potential to utilize trade exports of CEE countries.

Tarasov (2011) addresses that transportation cost is one part of trade cost, and other main part is development levels of both trading countries. Referencing his research, I consider the trading capability of each country is determined by its economic level and trading environment. Development level of country is based on its production performance (GDP) and economic size (population). Trading environment is weighted by trading barriers and trading facilitation. Trading barriers are composed by the tariff, and distance among partners, positively correlated with transportation costs. Trade barriers are offset by international institutions and trading agreements as trading facilitation.

Take a look back to the research questions I mentioned in the beginning of this session: Is the 16+1 Mechanism working as a plan to distribute China’s excess production? How can CEE countries optimize bilateral trading environment? Will CEE countries become new manufactory of China? These questions are put forward under the aim to assess the extent of facilitation and supports that 16+1 Mechanism can provide to CEE countries in the long term. Therefore, the research purpose of this paper is to ascertain concrete approaches of optimizing trade environment of China and CEE countries under the 16+1 Mechanism. All in all, this research is working out throughout two dimensions.
First one is the session of fundamental background illustrates and compares the freshest snapshot of China and CEE countries in 2016 by several key indicators, ranging from population, currency, status in international institution and years of memberships. Second one, evaluation of bilateral trade between China and CEE countries individually, to illustrate status quo of bilateral trade. Since the span of reference data ranges from 2006 to 2016, the most current relevant trading condition is under illustration in this paper, at the same time, the impacts of the 2008 financial crisis and European debt crisis are taken into account. Aiming on a relatively comprehensive understanding of bilateral trade environment between China and CEE countries among eleven years, this part of evaluation is focus on four dimensions. Specially these mentioned dimensions are illustrated and compared by country level and by time range. Namely, economic capability (GDP, GDP per capita, and GDP growth), trading volume (value of exports and imports), commodity patterns (key products groups by SITC classification), trading environment (exchange rates, tariff rates, and FDI). Furthermore, according to SITC nomenclature, classify exports products into five groups and estimate trade environment and trade potential of key fields. Specially, the groups of products will be picked up from SITC 0+1 for agriculture, SITC 2+4 for raw materials, SITC 3 for energy, SITC 5 for chemicals, SITC 7 for machinery and transportation equipment, and SITC 6+8 various manufactured products.

Since the 16+1 Mechanism is full of expectations, potential cooperation on various fields is offering a precious opportunity of increasing trade volumes for sixteen CEE countries.
and China. However, it is crucial to figure out the current bilateral trading environment for achieving utility maximization. To answer the research questions mentioned in beginning of this session, the approach of mine is going to illustrate current trading environment among China and CEE countries, and determine key indicators with influential impacts on trade potential of bilateral trade. On the basis of my illustration and literature reviews, corresponding research questions will get reliable clarifications originating from the following part of empirical analysis.

To illustrate trade potential of the 16+1 Mechanism, empirical analysis in this paper is mainly based on indicators relevant to bilateral trades between sixteen CEE countries and China. In particular, these sixteen indicators span among bilateral exports value, trade balance, rates of foreign exchange and imports tariff, stocks and flows of foreign investment, GDP and GDP related, storage of population, status of international institutions and years of being member in these institutions. Data applied in empirical analysis of this paper is ranging from 2006 to 2016 with annual average figures selected, for taking into account of the impact of the 2008 financial crisis and European debt crisis.

**3.2 Data, criteria and sources**

In respect of the storage of population, data is from the World Bank database. Firstly I presume that labour force is more precise than total population, for describing the capability of an economy’s productivity. While since GDP has already interpreted the production size, I turn to use population instead of labour force. In this regard, population
is proposed to interpret corresponding country's market size, which essential relates to local demand capability to foreign exports.

As for distance of CEE individuals to China, I choose the distance from capital cities of CEE countries to Beijing separately, and data is resourced from the GeoDist database of the French Institute for Research in the field of international economies. Distance is gauged by kilometre.

Regarding to status of international institutions, indicators are chosen to show the status of membership in EU and WTO. Furthermore, the last two variables related to international institutions are the history of EU member and the history of WTO member, representing the number of years that individual country has been in EU or WTO till 2016 (including 2016). For example, in case of Hungary, it joined in EU in 2004 and the variable of its history of EU member is value 13.

Regarding to GDP and GDP related, three indicators as GDP, GDP per capita and GDP growth are selected to reflect domestic productivity, national welfare and economic growth of sixteen countries individually. Database of the World Bank contributes data of all three GDP indices, GDP is calculated by total gross value added of domestic production of the economy, attached taxes levied on products and deducted subsidies (the World Bank, 2017). As for GDP and GDP per capita, both are measured by constant 2011 international dollars, which obtains same purchasing power parity rates (hereinafter referred to as “PPP”) as USD does in the United States during 2011 (the World Bank,
2017). This measurement applied on GDP indices makes sure comparable figures under consistent price level with limited impacts of exchange rate and inflation or deflation.

Exports value, are provided by the United Nations International Trade Statistics Database (hereinafter referred to as “UN Comtrade”) and processed by the World Integrated Trade Solution (hereinafter referred to as “WITS”, a data aggregator platform on trade and tariff and belongs to the World Bank). Data of dual-direction of trades are chosen, the merchandise exports value from CEE countries to China, and value of reversed trades, i.e. value of exports from China to CEE countries (or imports from CEE countries to China). The unit of both dimensions is thousands of USD. In addition, trade balance represents the difference between imports value and exports value from China to CEE countries. Data are own calculated and based on trades value from UN Comtrade.

Besides total value of bilateral trades, specifically, six merchandise groups are selected under classification of trading goods by the SITC classification. SITC, abbreviation of the Standard International Trade Classification, is a nomenclature of classification used by the UN on analysing statistics of international trades. Based on the materials, processed level, technology and other related aspects of trading products, overall trading commodities are segmented into six main groups. Namely, SITC 0+1 stands for food, beverages and tobacco (including live animals), SITC 2+4 for raw materials, SITC 3 for energy goods, SITC 5 for chemicals, SITC 7 for machinery and transportation equipment, and SITC 6+8 for various manufactured products (UNCTAD, 2017). According to literatures with subject of trade structure of CEE countries and China, the products
belonging to the SITC groups mentioned above are illustrated in this paper after brief analyse of bilateral trades. The introduction of SITC classification aims at specifying the analysis on current trades into certain pivotal merchandise categories, then providing detailed and precise conclusion and suggestion correspondingly. SITC Revision 4 is implemented in this paper, claimed by UN as current version of products nomenclature since 2006. Trade grouped data is provided by the UN Comtrade and processed by the WITS of the World Bank.

Relating to rates of foreign exchange are annual averaged data from 2006 to 2016, and obtained from UNCTAD. In part of foreign exchange rate, the value of currencies of seventeen economies is converted by the value of USD annually, and six countries belonging to Eurozone use Euro as common currency (Estonia, Latvia, Lithuania, Montenegro, Slovakia and Slovenia). While what it should be drawn attention, certain countries joined in Eurozone after 2006, namely Slovenia joined in 2007, Slovakia joined in 2009, Latvia joined in 2014, and Lithuania joined in 2015. The solution is that UNCTAD database represents the value of these mentioned local currencies by value of Euro correspondingly (UNCTAD, 2017).

Like data of foreign exchange, the import tariff rates are in simple average level. The source of data is from UN’s Trade Analysis Information System (hereinafter referred to as “TRAINS”), and the tariff line is processed from Harmonized System (hereinafter referred to as “HS”, a nomenclature of trading goods created by the World Customs Organization) to SITC Reversion 4 by the WITS data platform. Between two available
duty types, the Most Favoured Nation rates (hereinafter referred to as “MFN”) and the Effectively Applied rates (hereinafter referred to as “AHS”), the AHS is selected instead of MFN, as Serbia, Bosnia and Herzegovina are keeping status as observers of WTO. Moreover, situations of tariff policies are different for China and CEE countries. For CEE countries, on one hand for five Balkan countries, tariff taxes imposed to China are varied by countries. On the other hand, in case of EU members, according to statement of EU, the common tariff to China is implemented by all EU countries as an internal single market (EU, 2017). But there are two exceptions for countries who became EU members after 2006, namely Bulgaria (2007) and Croatia (2013). Their tariff rates are interpreted by individual level till they became EU members. On the other hand, for China’s tariff policy, various levels of tariff rates are levied on different exporting partners, no matter they are EU member or not. What I should indicate here, due to certain reasons, tariff rates of China to all CEE countries in 2012 and 2013 are missed by TRAINS, which may result in further analysis deviation. Furthermore, tariff rates are varied by different products contents of SITC groups accordingly.

In respect of the investment flows and stocks by foreign direct investment (hereinafter referred to as “FDI”) from China to CEE countries. According to the World Investment Report 2017, Chinese overseas investment is quite essential as China is ranked as the second largest outward FDI home economy in 2016 (UNCTAD, 2017). Yang and Chen (2016) indicate that, the stocks of FDI reflects the accumulated impact of investment, while the flows of FDI is more related to instant effect. Thus, both stocks and flows of
FDI from China to CEE countries are selected as variables in this paper. Data of FDI flows and stocks are provided by the *China Commerce Yearbook 2016*, published by the Ministry of Commerce of the People’s Republic of China (hereinafter referred to as “MOFCOM”). The unit of FDI is in ten thousand of USD, and FDI data collection spans from 2006 to 2015 which is the most current year with available data in this official source.

The last issue of this part that I want to clarify here, is about some exceptions during data selection. First, Montenegro and Serbia declared the independence in 2006, which leads to no available data for Montenegro and Serbia individually at that year (for example, exports value and imports value, tariffs, FDI). Second, several data are not provided by official database, which may result in slight deviation on analysis. In particular, trade value of Slovenia in 2016, data of grouped products by SITC in 2006, tariff rates of China to CEE countries in 2012 and 2013, FDI stocks and flows in 2016. As explanation from WITS, missing data of country or period is presumed as reporting countries fail to report in certain year, missing data of products groups means non-traded products of reporting countries (detailed explanation see Appendix).

Aiming on a relatively comprehensive illustration on trade potential of sixteen CEE countries and China, a trading environment analysis composed by indicators mentioned before is structured in the following part of empirical analysis.
4 Trading environment analysis

In the light of the economic and trading background of sixteen CEE countries and China under the 16+1 Mechanism, the research questions and correlated methodology are illustrated by last session. Therefore, aiming to analysing bilateral trading environment among China and CEE countries, how to find out the most potential fields on materializing, maximizing, optimizing the 16+1 Mechanism? To pursue reliable and comprehensive solutions, this session will evaluate present trading environment among China and CEE countries, then based on empirical analysis, define essential indicators with influential impacts on trading flows. In the end, combined results from trading environment analysis and trading flows analysis, discover potential trading fields among bilateral trades between China and sixteen CEE countries.

To manifest a panorama of economic and trading status quo of sixteen CEE countries and China, the analysis of trading environment will connect overall information related to economic capability, trading value, composition of trade, and trading relevancy. Time range of data is from 2006 to 2016, in this regard, two pivotal incidents have been taken into consideration as residual effects of the 2008 financial crisis and emerging approach of “Eastern Opening”. Specifically, the process of evaluation is predetermined under the

3 Montenegro and Serbia declared the independence in 2006, which leads to no available data for Montenegro and Serbia individually at that year.
basis of country-by-country, and moreover, in level of certain product categories classified by SITC nomenclature.

The outline of following evaluation mainly references the research of Inotai (2013) on bilateral trading environment between China and EU countries. Four dimensions present as main components of this part. First, economic capability accessed by GDP, GDP per capita, and GDP growth. Second one is about trading value gauged by exports and imports among bilateral trades. Third, composition of trade presented through main products groups classified by SITC nomenclature. At last, the fourth one is trading relevancy illustrated by tariff rates, exchange rates, and FDI stocks and FDI inflows.

4.1 Fundamental background

First and foremost, it is proper to take a review on basic backgrounds of China and sixteen CEE countries. This snapshot of relevant countries in 2016, is ranging from population, currency, distance, status in international institution and years of memberships. In addition, average and total levels of sixteen CEE countries are generated by own calculation, aiming to manifest further comprehensive and visible comparisons among regimes of CEE countries and Chinese (see Table 1). The explanations that choosing these indicators are as following. First, indicator of population has two functions. On one hand, it interprets corresponding country’s market size, related to local demand capability to foreign exports. On the other hand, population can reflect potential labour factor endowment one country obtain. Second, currency shows the monetary regimes one
economy belongs to and the likelihoods it gets influenced by the fluctuation of interest rate in international market. Third, distance of two countries, works as main influence on transportation costs, and it plays negative effects on trade volume. Fourth, status of membership in international institution, namely EU and WTO, indicates extra access to and benefits from the markets where the institutions influence. And the year to join correlated institution, tells the history of being involved in regional or international trading regimes. It always presumes the longer countries have been, the better they interact with external trading environment.

From the information containing in Table 1, the first step is basic information of sixteen CEE countries. Regarding to population, the average level of CEE is 7.56 million, and Poland (38.59 million), Romania (19.37 million), Czech (10.55 million), and Hungary (9.82 million) stand for states with large population among them. Comparatively, Montenegro (0.63 million), Estonia (1.31 million), Latvia (1.96 million) and Slovenia (2.07 million) are four holders with smallest inhabitants. Respecting the currency, it can be seen that six countries belong to Eurozone (Estonia, Latvia, Lithuania, Montenegro, Slovakia and Slovenia), whilst ten countries have own currencies.

In terms of distance, it is positively correlated with transportation costs, while negatively correlated with trade flows in most cases. As for distance of CEE individuals to China, inspired by Ranilović (2017), the distance is chosen from capital cities of CEE countries to Beijing separately. Sixteen countries locate as neighbouring countries in Central and East European region, and the average distance of them to China is 7273.44 km. Estonia
situates as the nearest one and Slovenia is the furthest one comparatively. Distance is a negative effect on trade flows, since the longer two countries’ trades need to travel, the higher the cost of products would be. As Bergstrand and Egger (2006) advocate, distance is evidently reducing trade costs as an indicator of trade costs. Thus, long distance is inevitably to be the obstacle among trades between CEE countries and China, generate higher transportation costs, and constraint the flexibility of transportations.

As for status in EU, except Albania, Bosnia and Herzegovina, Macedonia, Montenegro, and Serbia, the rest eleven countries are EU members. Bulgaria (2007), Romania (2007) and Croatia (2013) are the youngest EU members among them. In case of WTO involvement, most CEE countries obtain long history with WTO on trading issues, but Bulgaria and Serbia remain observer status.

Then the second step is comparison between China and CEE countries, China owns absolute advantage on labour endowment, which means 182 times higher than CEE average population whilst 11 times higher than total level. Based on Heckscher–Ohlin theorem, great endowment of labour factor determines China’s trade pattern focus on labour-intensive products in the beginning. However, China is gradually earning trading advantages on machinery even high-technology products (see details in part of Composition of trade). Chinese currency, Chinese yuan (hereinafter referred to as “CNY”) gained the Special Drawing Right in 2016, as proportion of basket measuring currency applied by IMF (IMF, 2016). It has improved CNY’s international influence in foreign
Source: population from the World Bank, currency from UNCTAD, distance from the GeoDist, information of EU members from europa.eu, information of WTO members from wto.org.

exchange market, and would facilitate China’s international trading activities further. For instances, Poland became the first non-Asian country issuing CNY-dominated debt in 2016, and Hungary issued CNY-dominated debt in 2017 (Allen, 2017). Both activities show the willingness of CEE countries to strengthen economic connection with China, accompanied with the rapid growing of bilateral commercial trades.

Since being common memberships in WTO for most CEE countries and China, tariffs and non-tariff barriers practically get decreased or diminished under MFN and other
related trading principles issued by WTO. Even though China is not fated to get involved into EU regime due to geographical difference, numerous cooperative agreements between EU and China have been signed recent years, such as the EU-China 2020 Strategic Agenda for Cooperation, the EU China Trade Project, and the EU-China Customs Cooperation (EU, 2017).

The session of fundamental background analysis, illustrates China and CEE countries basic information in terms of population, currency, distance, status in international institution and years of their memberships. Through comparison of data in levels of CEE average and China, a fundamental understanding is generated based on two regimes background. As has been noted, due to population size, CEE countries have much smaller economic scale and trading capability compared to China, in turn China owns absolute advantage on labour factor. Common membership in WTO and cooperative trading agreements is facilitating bilateral trading relationship via mitigating tariff and non-tariff barriers, while long distance between two regimes is indeed negatively offset these facilitations. Geographical inconvenience is inevitably to be the obstacle among trades between CEE countries and China, generate higher transportation costs, and constraint the flexibility of transportations.

Source (Graph 1-3): the World Bank with own calculation
4.2 Economic capability

Regrading to countries’ economic capability, GDP, GDP per capita and GDP growth are selected from database of the World Bank. These three indicators manifest domestic productivity, national welfare and economic growth of seventeen countries respectively. Moreover, both GDP and GDP per capita are measured by constant 2011 international dollars, which ensures comparable figures are under consistent price level and limited impacts from exchange rate and inflation or deflation.

Given that apparent varieties in economic sizes, it is inevitable to face great gaps not only between China and CEE countries, but also among CEE countries. In 2016, the GDP value of China is 20 times as large as that of Poland, who owns the biggest GDP value out of CEE countries in 2016. It would be hardly visible if put GDP data of Chinese and CEE countries together. Therefore, only data of GDP PPP of sixteen CEE countries are chosen to present in the Graph 1. By Graph 1 it can be seen that, from 2006 to 2016, Poland (USD 987 bn in 2016) maintains the rank with largest production scales among sixteen CEE countries, then followed by Romania (USD 427 bn in 2016), Czech (USD 328 bn in 2016), Hungary (USD 249 bn in 2016) and Slovakia (USD 158 bn in 2016). Meanwhile, Montenegro (USD 9.75 bn in 2016), Macedonia (USD 27.2 bn in 2016), Albania (USD 32.9 bn in 2016) and Estonia (USD 36.5 bn in 2016) are with smaller economic sizes than the rest CEE countries. At last, it should indicate another incredible finding here, between the largest (Poland) and the smallest (Montenegro) economies among CEE group, the difference of their GDP even reaches to 101 times.
In respect of GDP per capita (see Graph2), Czech (USD 31072 in 2016) and Slovenia (USD 29804 in 2016) are leading top places among whole period, but Slovenia performed better than Czech till 2011. Before the 2008 financial crisis, Estonia (USD 27735 in 2016) was in top three highest income countries. Whilst after 2008, Slovakia (USD 29156 in 2016) grows rapidly over Estonia and takes its place. On the contrary, Albania (USD 11424 in 2016), Bosnia and Herzegovina (USD 11179 in 2016), Macedonia (USD 13055 in 2016) and Serbia (USD 13720 in 2016) are on the bottom of ranks, and their GDP per capita is lower than China’s in 2016. Since China (USD 14401 in 2016) is still standing in troop of developing economies, regardless of outstanding performance on production outputs, massive population base and wide property gap existing in Chinese society make its GDP per capita below most CEE countries. Columns of China’s GDP per capita are indicated by broad red in Graph 2.

Regarding to GDP growth rate (see Graph3), two phenomena of pre-crisis and post-crisis might explain why CEE countries turn to Asian markets and propose “Eastern Opening” cooperative strategy. CEE countries got universally attacked by the Great Recession of 2008 to 2012. It is quite visible that during 2008 to 2010, most CEE countries crashed down below zero-line. Especially Lithuania, Latvia, Estonia hit the bottom (around -15%) in 2009, however Poland and Albania still managed to keep the strength of growth among this period. Experiencing a short break of 2009 to 2010, CEE countries faced a “frozen winter” in 2011 with return of negative growth rate due to European debt crisis. Somehow, it is glad to see majority of CEE countries gradually recover to positive growth rate after
2013. The growth rate of Romania is remarkable and got the fastest rate of near 5% in 2016, and the rest ranged from 1.5% to 3.5% approximately.

Comparatively, China remained positive and energetic growth rate among whole period. However, the legend of China’s growth is declining, from the highest rate of 14.23% to recent lowest of 6.7% in 2016, resulted from weak international consumption capability and domestic industry restructure.

Altogether, evident productive gaps remain not only between China and CEE countries, but also among CEE countries. Most CEE countries still own high income level than China does in term of GDP per capita, even though China presents massive economic productivity. The Great Recession hard attacked economic growth of CEE countries, which is vital reason for their “Eastern Opening” proposal.

Source (Graph 4-12): UN Comtrade, processed by WITS, the World Bank
4.3 Trading value

Value of trades, are provided by the UN Comtrade and processed by the WITS of the World Bank. Dual-direction of trades are chosen, i.e. the merchandise imports value from CEE countries to China, and value of reversed trades, value of exports from China to CEE countries. The unit of trades value is thousands of USD. In addition, trade balance represents the value difference between imports and exports value from China to CEE countries. Trade balance is own calculated based on bilateral trades value.

As shown below, Poland, Czech, Hungary and Slovakia are taking remarkable positions in China’s external trades in Eastern and Central European region. The overall trend of China’s exports to CEE countries keeps growing (see Graph 4), except declines in 2009 and 2012. Before 2013, Poland (USD 23.4 bn in 2016), Czech (USD 17.8 bn in 2016) and Hungary (USD 4.87 bn in 2016) were the top three consumers of Chinese products in Central Eastern Europe region. Then Slovakia (USD 6.35 bn in 2016) took place of Hungary and become the third biggest importer of Chinese goods in Central European Regions. It might be that economic size constraints consumption capability, countries with smallest economic sizes, like Montenegro (USD 0.2 bn in 2016), Macedonia (USD 0.42 bn in 2016) and Albania (USD 0.49 bn in 2016), consume less than larger CEE economies.

Concerning CEE countries’ trade with China as exporters (see Graph 5), Hungary (USD 2.25 bn in 2016), Czech (USD 1.92 bn in 2016), Poland (USD 1.91 bn in 2016), Slovakia
(USD 1.26 bn in 2016) are the biggest suppliers to China’s market. Meanwhile, Bosnia and Herzegovina (USD 0.014 bn in 2016), Montenegro (USD 0.02 bn in 2016), and Serbia (USD 0.025 bn in 2016) export much less than their CEE peers. Similar with exporting regime of CEE countries, it is these countries with regional comparatively large economic sizes that keep vibrant and energetic trading interactions. Furthermore, description of merchandise composition will present in the part of composition of trade.

About details of trade values between CEE and China, the more comprehensive explanation should focus on trade balance between two groups of economies (see Graph 6). Obviously, it is inevitably that CEE countries experience trade deficits when trading with China as an extreme exports dominant. Generally speaking, it can be seen that gaps of trade balance are enlarging. Back to value of exports and imports between two economic groups, the entire wave of two directions are growing (except exports from Slovakia is decreasing in recent three years). However, it seems the growth of China’s exports is faster than CEE countries’ exports in return. Especially, Poland (USD -21.5 bn in 2016), Czech (USD -15.8 bn in 2016), Slovakia (USD -5.09 bn in 2016). This scenario might be showing a sort of trading dilemma, the more trades you do, the larger deficits you face.

After reviewing trading values between China and CEE countries, overall trend of dual-direction trading values is gradually growing. Poland, Czech, Hungary and Slovakia stands at top trading partners to China in Eastern and Central European region. However,
CEE countries are experiencing serious headache from so called “trading dilemma”, as CEE countries’ trade imbalance is enlarged by surging bilateral trades.
4.4 Composition of trade

After evaluation of bilateral trades on basis of country-by-country, the part of composition of trade will work on the level of products categories classified by SITC nomenclature. Accordingly, assessments following on current trades flows can be specified into certain merchandise categories, then facilitate to draw more detailed and precise observations and suggestions later. In the end of this part, it is proposed to determine that, trade structures between China and CEE countries follow the trade theory of comparative advantage (Ohlin, 1933) or the theory of intra-industry (Helpman and Krugman, 1985).

Generated by the WITS data platform, the merchandise traded between China and sixteen CEE countries are divided into six groups from two directions of trades. The current version of SITC Revision 4 is applied to classify the groups of products by this paper. As a nomenclature of classification used by UN on analysing international trades, SITC segments trading merchandise into six groups. According to UNCTAD (2017), namely six groups are food, beverages and tobacco (SITC 0+1), raw materials (SITC 2+4), energy goods (SITC 3), chemicals (SITC 5), machinery and transportation equipment (SITC 7), and manufactured products (SITC 6+8).
For sake of succinctness and comparability, representations of composition of trade would be only done among three years of 2007\textsuperscript{4}, 2009 and 2015\textsuperscript{5}. Owing to the selections of 2006 and 2015 are for whole-range comparison. In case of year 2009, it is a good witness of the Great Recession of 2008 to 2012. Review Graph 4 and Graph 5 about bilateral trading value among CEE countries and China, it is conspicuous to observe impacts of the Great Recession. In one hand, imports to CEE countries from China, universal declines happened in year of 2009, after hard attacks in 2008 financial crisis. On the other hand, the value that CEE countries export to China, experience a slightly drop-off in 2012, which might be caused by weak productivity in side of supply from CEE countries during the European debt crisis.

In the side of CEE countries’ exports to China, the most evident feature is the decreasing share of machinery and transportation equipment and increasing share of food from 2007 to 2015 (see Graph 7, Graph 8, Graph 9). The main components of CEE countries’ trade composition of exporting, starting from the top they are machinery and transportation equipment (SITC 7), manufactured products (SITC 6+8), raw materials (SITC 2+4) and chemicals (SITC 5). From 2007 to 2015, these four groups account for over 90\% proportion. Products of machinery and transportation equipment is taking up the largest part, which is 61\% in 2007 to 51\% in 2015. Same situation to chemical goods (SITC 5),

\begin{itemize}
\item \textsuperscript{4} From WITS, the SITC grouped data lack the one of 2006 (see Appendix).
\item \textsuperscript{5} Slovenia lacks the trading data of 2016 during procedure of this paper (see Appendix).
\end{itemize}
this group faced 4% loss from 9% in 2007. While increases are spreading from manufactures (20% in 2007 to 32% in 2015), and goods belonging to items of food, beverages and tobacco (1% in 2007 to 3% in 2015). The rest two products groups, raw materials (SITC 2+4) and energy goods (SITC 3) more or less are keeping the same levels of 9% and around 1% respectively.

Generally, constant changes have happened among all products categories, regardless of the share in 2009. Thus, the impacts of the Great Recession of 2008 to 2012 do not essentially influence the trade composition of CEE countries’ exporting to China.
Graph 8. Composition of trade, CEE exports to China, 2009 (thousands of dollars)

Graph 9. Composition of trade, CEE exports to China, 2015 (thousands of dollars)
In another side of China’s exports to CEE countries, besides slight variances, the fundamental proportion of trade composition maintain the similar shape from 2007 to 2015. The biggest part making up China’s exports to CEE countries are machinery and transportation equipment (SITC 7), which is in line with the first exporting goods from CEE countries to China. The following part is manufactured products (SITC 6+8), taking share of 35% in 2007 to 30% in 2015. Top two products groups in China exports have occupied over 90% out of total, compared with CEE countries’ exports, China’s exporting trade pattern is much less diverse. Then the third one is the chemical product (SITC 5), with consistent level of 3%. The rest are composed by food products (SITC 0+1), raw materials (SITC 2+4) and energy goods (SITC 3). Similarly, the trade composition of China’s exports to CEE countries has not been distorted by neither the 2008 financial crisis nor European debt crisis.

Through comparisons of the trade composition between dual-direction of trading activities, the top-frequently traded products are constituted by machinery and transportation equipment, manufacture products and chemicals. It may explain the trade pattern of China and CEE countries is typical two-way trade (Helpman & Krugman, 1985), which indicates high frequency of interindustry trades operated by bilateral trades. However, in case of raw materials, its proportion in CEE countries’ exports is much more than in China’s exports, even same to its trade value. It is incredible to see that, in group of raw materials, the value of exports from CEE countries is double than value earned by Chinese exports in 2016 (USD 761871 bn vs. USD 371200 bn). This finding convinces
me that CEE countries own comparative advantage to trade with China on account of raw material goods, such as refined copper, iron products, plastic and rubbers and etc.

All in all, assessments on composition of trade with classification by SITC nomenclature show a more detailed image on bilateral trading structure. Three points should get indicated here. First, the 2008 financial crisis and European debt crisis did not significantly impact the proportion of trade composition between China and CEE countries. Second, large scale of two-way trade happens among two regimes, as machinery and transportation equipment, manufacture products and chemicals are both exported and imported by their bilateral trades. Last but not least, CEE countries own
comparative advantage on raw material products, and gain trade surplus on this category even though facing large trade imbalance overall.

Take a step further, I want to segment composition of bilateral trades for four China’s important trading partners in Central and Eastern Europe, namely Poland, Czech, Hungary and Slovakia. For four countries, top exports groups from China are most composed by machines, instruments, textiles and metals. In turn of four countries’ exports to China, machines, transportation, instrument, metals generate the majority share. Specially, large amount of exports is from computer, broadcasting equipment, office machinery, telephone in group of machines, LCDs dominants the group of instruments, metals group mostly contains iron products, and vehicle parts is taking essential share in group of transportations. What about the other side of imports? The imports from four countries are more diverse. As to essential proportion of exports, Poland’s refined copper takes 19% and vehicle parts take 10% of its total. 58% of Czech exports to China are machines, and electronic lighting and signal equipment takes the first place in this group. Almost half of Hungary’s exports are composed by spark-ignition engines, electrical transformers, computers such kinds of machines, and cars take near 30% share overall. But it is more impressive to see that Slovakia’s 64% exports to China are cars.

It can be seen, detailed composition of trade provides concrete illustration on trade patterns of China and CEE countries. One part of trades is generated by comparative advantage, as China’s LCDs, computer, telephone and textiles, Poland’s copper, Hungary’s spark-ignition engines, Czech’s electronic lighting, and more important
components, Slovakia’s cars. Another part is facilitated by intra-industry trade, for instance, bilateral trades on vehicle parts. Particularly, Hungary have 2.5% of imports as chemical compounds from China, at the same time, 3.5% of its exports to China are package medicaments and nucleic acid (related to FDI of Chinese enterprise in Hungary, details in part of FDI).

Moreover, according to empirical analysis of Yang and Chen (2016), sixteen CEE countries own superiority on primary products and resource-abundant products, while China is quite specialized on labour-intensive manufactures as textiles, clothes and foot wares. It is consistent with the result of my analysis above, which is that raw material products (SITC 2+4) take up 9% of CEE countries’ exports to China, and manufactured goods (SITC 6+8) from China keep around 30% share totalled. Meanwhile, in category of medium-technology products, CEE countries obtain comparative advantages. But comparatively, China is in leading position of exporting high-technology products among bilateral trades (Yang & Chen, 2016).

Thus far, as be noted above, intra-industry trades or two-way trades are quite common in regard of bilateral trades between China and CEE countries, what indicators can influence the share of intra-industry trade to some extent? Literatures related to this topic contribute several suggestions. In one way, Helpman and Krugman (1985) advocate that higher income level generates more demand and supply of intra-industry trade. Since income level determine the extent of country’s economic development, the demand for intra-industry trades will get increased by growing income. In another way, the factor of trade
costs is an unavoidable in intra-industry trade. Bergstrand and Egger (2006) find that trade costs significantly influence the share of intra-industry trade, both on differentiated goods and homogenous goods. Moreover, Anderson and van Wincoop (2004) indicate “trade costs matter”, in case of a rich country, expense of transportation would reach 1.7 times of trade barriers costs. At the same time, economic policies related to infrastructure construction are highly related to trade costs, and trade costs can generate large positive spill-overs on social welfare. To sum up, for accelerating intra-industry trades, China and CEE countries are suggested to work on increasing income level, at the same time, lowering trade costs. In this regards, the 16+1 Mechanism is consistent with both cases.

4.5 Trading relevancy

4.5.1 Exchange rate

Inspired by (Ranilović, 2017), the exchange rate of currencies is considered into one of trading relevancies, for evaluating the impacts of exchange rate variability on trading environment (see Graph 13). UNCTAD database provides data of foreign exchange rates. Value of twelve currencies adopted by seven countries are converted into USD (six countries are in Eurozone, details of currencies please see Table 2). Exchange rates are presented as level of annual average.

It can be seen in graph, except China’s CNY faced value appreciation in 2006 to 2016, sixteen CEE countries experienced general depreciation in value of currencies. Consequently, the appreciation of CNY benefits Chinese purchasing power, then increase
the imports volume from CEE countries (see Graph 5). Meanwhile the volume of exports from China may face fellings correspondingly (see Graph 4). On the contrary, the depreciation of CEE currencies would cause increase in CEE’s exports while decrease of CEE’s imports, which generate improvements on their trade balance even balance of payment to some extent (see Graph 6).

Furthermore, in essence, it is obvious that Euro is playing as weathervane of the direction of currencies involved in this region. The value of majority currencies of sixteen countries have experienced similar waves of value fluctuation. Overall consequence is depreciation in regard of USD. Separately description is that, appreciation happened from 2006 to 2008, then depreciation from 2008 to 2016. Namely, Euro, Bosnia and Herzegovina’s BAM, Bulgaria’s BGN, Poland’s PLN, Romania’s RON, and Croatia’s HRK. The rest currencies from Central and Eastern European countries also experienced swings slightly.

Two supplementary information can be gotten from graph of exchange rates are about the level and similarity in respective of currencies’ value. On one hand, as quotation format is in 1 CCY/USD, which means how many USD can be converted into one local currency. The higher the line of exchange rate is, the more value the currency has. On the other hand, for countries adopted currencies with similar price in comparatively long term, external trades among them would face less risks related to exchange rates than with other countries. Thus, countries belonging to Euro group are showed as the highest line in graph. Even though UNCTAD has indicated that for certain countries joined in Eurozone after 2006 (Slovenia, Slovakia, Latvia, Lithuania), the value of their currencies in each year
will be exchanged into Euro. Somehow what I find in data is the value of Euro to all Eurozone countries is the same, no matter which year of these data. Meanwhile, the value of Bosnia and Herzegovina’s BAM and Bulgaria’s BGN are similar from 2006 to 2016. It makes the exchange rates of BAM and BGN almost overlap, which is shown by the second highest lines in the graph. The third group consists of Poland’s PLN and Romania’s RON. Then Croatia’s HRK and China’s CNY follow. The rest are in the group of bottom with the lowest price, namely, Czech’s CZK, Macedonia’s MKD, Bulgaria’s BGN and Hungary’s HUF.

As shown above, CNY appreciation enhance China’s purchasing power, and increase trade volume from CEE countries. Depreciation of major CEE currencies are following the fluctuation pattern of Euro. Similarity of exchange rate among CEE countries is benefiting them with less risks related to exchange in external trades.

Source: UNCTAD
Graph 13: Exchange rates of currencies of China and CEE, 2006 – 2016 (1 CNY/USD)
4.5.2 Tariff rate

According to clarification of the WTO, tariff means “customs duties on merchandise imports”. It is default to use this definition of tariff in this paper, which means that tariff rates reflect the rates of tax levied on the value of imported merchandise goods (ad valorem tariff), by importing countries on exporting countries. Source of tariff data is from the TRAINS of UN and processed by WITS data platform. Here are several criteria when selecting tariff data. First, the type of tariff rates applied in this paper is ANS (the Effectively Applied rates) instead of MFN (the Most Favoured Nation rates), since two countries as Serbia, Bosnia and Herzegovina are holding status as observers of the WTO. ANS indicates the lowest available tariff rates, either preferential tariff or MFN applied tariff (WITS, 2010). Second, tariff data is in level of simple average and transferred from HS nomenclature to SITC one by WITS data platform. The last but not the least, some data of tariff rates are missed by WITS, mainly tariff rates of China to CEE countries in 2012 and 2013 (details please see Appendix). As stated by WITS, the missing data is presumed as lack of reports from reporting countries.

The policies of tariff vary not only between China and CEE group, but also among individuals of CEE countries. In one way, for EU members, the common tariff rate is applied by member countries. In another way, China’s customs implement various levels of tariff rates based on exporting partners individually, no matter they are EU member or not. While for Balkan countries, they are in the same case as China.
China’s tariff policy is diverse and changing in regards to sixteen CEE countries (see Graph 14). Compared with the tariff rate that China imports from the world, mostly CEE countries are above the average world level but keep the similar overall trend. In 2006, Estonia enjoyed the lowest tariff rate among their CEE peers (7.15%), while Macedonia faced the worst exporting situation with 13.08% tariff rate. Turn to 2016, Montenegro gained from China with tariff rate bonus of 4.44%, but Albania was suffered by the tariff rate of 14.14%. Meanwhile, one comparatively common feature occurred in 2008, the tariff rates of China got universal decrease to most CEE countries. I assume that in that year, China might tend to send the motivation to its partners for engaging into more international trades, under the sluggish environment of global economy.

As for eleven countries belonging to EU group, overall wave of tariff rates on China’s imports tends to a slight growth. The more important is that, a visible convergence among tariff to these eleven countries. Firstly, the variation of rates range is narrow among 2% (8.5% to 10% in 2006, 9.4% to 10.8% in 2016). Secondly, EU countries are generating similar tariff pattern, except Latvia is a bit higher than the average in 2011.

Take a further step to countries trading with China more frequently, which are determined as Poland, Czech, Hungary and Slovakia in part of Trading value of this session. In case of China’s four trading allies, their tariff path follows the same pattern as EU countries. First, the tariff rate imposed on four countries is slightly increasing in eleven years. Second, their overall tariff level is among the average of all CEE countries. And
individually they don’t have large difference and almost follow the same pattern in whole period (around 8.8% to 9.5% from 2006 to 2016).

In another side, with respect to tariff rates of CEE countries to China from 2006 to 2016, EU’s tariff is the lowest among them, whilst Macedonia obtains the highest (see Graph 15). EU countries impose common tariff to external countries as an internal single market, namely Czech, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, Slovenia. Moreover, recent two years, Montenegro has the trend to converge its tariff rate with EU level. Between Macedonia and EU, the levels of tariff rates imposed on China’s exports are descending from Serbia, Bosnia and Herzegovina, Albania, Montenegro.

At the same time, it is worth taking a look at for Bulgaria and Croatia. Both are countries became EU members after 2016, their tariff rates are different to EU rates before they joined in EU. It is clear to see differences of tariff level before and after they got involved in EU. In 2006, the average tariff rate of Bulgaria to China is 10.71%, as the highest among sixteen CEE countries, then the rate slimmed to 3.76% as EU level after it joined EU in 2007. The same situation is to Croatia. Before it became EU member in 2013, its tariff rates were always higher and keeping a more fixed level than EU countries. To Bulgaria, after reduced its tariff rate in line with EU standard, the exports value from China grew from USD 0.97 bn in 2006 to USD 1.57 bn in 2007 (see Graph 4).

However, it is quite an exception that the imports Croatia got from China did obvious decrease (USD 1.49 bn in 2012 to USD 0.77 bn in 2013, then USD 0.59 bn in 2014), after
Croatia became EU member in July of 2013. It is necessary to figure out reasons behind it, so I did an investigation based on data of the World Bank database in the following.

First in first, Croatia’s GDP growth rate maintained negative during 2009 to 2014 (see Graph 3). Therefore, the GDP of Croatia hasn’t recovered to pre-crisis level (USD 97.6 bn in 2008) till 2016, and GDPs of 2013 and 2014 present as the lowest among eleven years (see Graph 1). Second, in total level of Croatia’s exports and imports, it can see that trades value in dual-direction face drop-offs in 2009. As Ranilović (2017) indicates, the financial crisis brought strong decline on Croatia’s external trades, especially on side of imports. Third, the imports of Croatia are on the trend to grow in post-crisis period. Actually, the ratio of imports out of GDP is rising after 2010 (the World Bank, 2017), alongside with its GDP stopped dropping until 2014. It means that reduced tariff does facilitate the trading activity in some extent, even though the overall economic environment is not enough supportive. After outbreak of financial crisis, Croatia got swamped into long time recession, as a result, around 12.5% of its GDP decline. In brief, due to weakness of domestic economy, the decreasing demand of Croatian market weakens its imports capability inevitably. However, tariff reduction generated by EU regime does optimize trading situation in some extent.

Source (Graph 14-15): TRAINS, the United Nations
Graph 14: Simple average tariff rates of China to CEE, 2006 – 2016 (%)
In short words, China’s tariff policy is diverse and changing in regards to sixteen CEE countries. Compared with the tariff rate that China imports from the world, mostly CEE countries are above the average world level but keep the similar overall trend. But there is convergence among tariff to EU groups and important trading partners. The Great Recession caused the decreasing demand of CEE market, then weakens its imports capability inevitably. However, tariff reduction generated by EU regime does optimize trading situation in some extent.

4.5.3 FDI

FDI represents as an important indicator to the tendency of global economy, and reflects real economic condition via investment activities of multinational enterprises (hereinafter referred to as “MNE”). Due to economic sluggishness and policy uncertainty, global FDI inflows decreased by 2% in 2016. Modest performance of MNEs from Europe, mainly causes 11% stepdown of FDI outflows to USD 1 tn in 2016 (UNCTAD, 2017). On the contrary, state-owned MNEs, only accounting for 1.5% of MNEs globally, operated 11% of greenfield investments in 2016, and China is the country owning the most state-owned MNEs (UNCTAD, 2017). Regarding to the World Investment Report 2017, China is ranked as the second largest outward FDI home economy in 2016, and China’s overseas investment is quite significant among recent years. Although traditional top FDI destinations of China are Hong Kong, Cayman Islands, the United States, and so forth (MOFCOM, 2016), countries among the BRI are fast growing as emerging market of China’s outward FDI. According to official resource, countries involved in the BRI have
received FDI invested by Chinese enterprises with value of USD 14.53 bn in 2016, and new signed projects of the BRI in this year have created USD 126.03 bn which accounts for 51.6% of Chinese overseas projects in 2016 (MOFCOM, 2017). In this regard, it is critical to pay attention on the investment relation between China and sixteen CEE countries under the background of the 16+1 Mechanism.

FDI data are originated from the China Commerce Yearbook 2016, and value of FDI is in ten thousand of USD. From this official source, 2015 is the most current year with available data. Since FDI stocks reflect the simulative effects of investment, and FDI flows generate instant impacts (Yang & Chen, 2016), both stocks and flows of FDI from China to CEE countries are under analysis.

From 2006 to 2015, overall sixteen CEE countries have stimulated FDI stocks from China in various levels, and Hungary is the host country with largest FDI stocks among them (see Graph 16). The general trend is under surging up, starting from the top, Hungary, Romania, Poland, Bulgaria, Czech, Slovenia and Serbia are at superior level than the rest. In ten years, these seven countries named above have experienced the amount of FDI with growth of four times to even fifty times.

As can be seen from data of FDI inflows in 2006 to 2015, CEE countries are taking active FDI interactions with China (see Graph 17). Several outstanding activities of FDI flows indeed need furthermore interpretations, for getting more details of Chinese investment in CEE countries. For instances, Hungary received an FDI worth USD 36.8 mn in 2010,
which comes from a takeover deal of Hungarian chemicals manufacture BorsodChem by Chinese enterprise Wanhua (Bryant, 2011). Due to increasing sales of electronic bus in Europe, Chinese automaker BYD invested Euro 20 nm for building bus assembly factory in Hungary in 2016 (BYD, 2016). Chinese telecom enterprise, Huawei established its European Design Center in Romania with planned investment of Euro 100 mn till 2018 and around 900 job creation (European Foundation, 2014). What’s more, cooperating with Bulgarian company Litex Motors, Chinese car company the Great Wall Motors invests a car assembly manufactory in Bulgaria in 2012 and hires skilled Bulgarian workers to work on car components from China (The Economist, 2012).

Yang and Chen (2016) investigate the impact of China’s FDI on transformation of trading structure in Eastern Europe region. They state that FDI outflows of China improve the transformation of trading structure among sixteen CEE countries. Especially, the 16+1 Mechanism does facilitate this improvement generated by China’s FDI outflows, China is increasing FDI outflows specialized on infrastructure construction. For CEE countries, the flow has increased by 160% from 2013 to 2014 (Yang & Chen, 2016).

Source (Graph 16-17): *China Commerce Yearbook 2016, MOFCOM*
Graph 17. FDI flows from China to CEE, 2006 – 2015 (ten thousand of USD)
As to the reasons that Chinese enterprises choose to invest in CEE countries, first one is the assessment to the EU market. As Helpman & Krugman (1985) indicate that market-seeking FDI can generate trading volume of host countries. But it can’t be ignored that Balkan countries in CEE countries group also keep active actions with Chinese investment. So, second reason of Chinese investment in CEE region is technology transfer from Chinese enterprises as Huawei to local subsidiaries in Hungary and Romania (The Economist, 2012), similar to many American and Japanese car companies operating in this region. Back to the part of Trade Composition, it can be found that growing technology-intensive exports are taking large proportion gradually among trades from China to CEE countries. Third reason should be the advantage on high-quality and high-skilled human capital endowed with CEE countries. On one hand, CEE countries own large amount of high-quality human capital educated by advanced local education system, these talents from CEE countries usually obtain sound academic background and dual-lingual even multilingual advantages. On the other hand, massive skilled workers have gained years’ experience of working in subsidiaries of German, American, Japanese companies in CEE countries, as Nissan, Suzuki, Fiat, Mann and etc. Moreover, compared with salary level of Western Europe, costs on labour force are comparatively lower in CEE countries. Good condition of human capital can lead FDI inflows (Alfaro et al, 2006), since owning substantial high-qualified human capital storage, CEE countries have great potential to attract progressive Chinses FDI in the future.
FDI has strong spill-over effects on financial development and economic growth of host markets (Alfaro et al, 2006). Taking place of developed economies, emerging economies are gradually leading FDI activities and have become the largest FDI recipient and investor (HE, 2015). As the second largest outward FDI home economy in 2016, China is commented as “most promising source of FDI” (UNCTAD, 2017). The motives behind activated FDI flows into CEE countries, are that Chinese enterprises seek for market assessment to Europe especially to EU, however, the more impressive investment drive is technology transfer from Chinese enterprises. The future of expanding FDI cooperation among China and CEE countries is prospered. In one way, large share of two-way trades will generate more investment fields. As examined in the part of Composition of trade, over 80% of bilateral flows are composed by two-way trades, ranging sectors of machinery and transportation equipment, manufactured products and chemicals. In another way, ideal geographic location and high-qualified human capital storage are strong competitiveness for CEE countries to attract FDI inflows from China.

To sum up this session, first of all, there are huge differences and large gaps exist in terms of population and geographic distance, economic size, income level and economic growth to trade values and trade balance between China and CEE countries.

From the segment of trade composition, apart from comparative advantage from CEE countries’ raw material, transportation equipment with China’s machines and manufactured products, large share of two-way trades on machinery.
The appreciation of Chinese CNY with depreciation of CEE currencies have strong impacts on trade flows. Euro is leading as an absolute influential currency to currencies of CEE countries. In the meantime, currency price similarity of CEE countries diminishes exchange rate risk.

The Great Recession caused the decreasing demand of CEE market, then weakens its imports capability inevitably. However, tariff reduction generated by EU regime does optimize trading situation in some extent. China’s tariff policy is diverse and changing in regards to sixteen CEE countries. On contrary, there is convergence among tariff rates to EU groups and important trading partners, which means no large variation and almost follow the same pattern in whole period. Compared with the tariff rate that China imports from the world, mostly CEE countries are above the average world level but keep the similar overall trend.

The motives of active FDI activities among CEE countries, are that Chinese enterprises seek for market assessment to Europe especially to EU, however, the more impressive investment drive is technology transfer from Chinese enterprises. CEE countries have strong competitiveness and great potential to attract more Chinses FDI in the future.

Based on the analysis of trading environment between China and CEE countries above, a comprehensive overview has been obtained by my side, and it is high time that I should answer three research questions raised in previous session.

1. Is the 16+1 Mechanism working as a plan to distribute China’s excess production?
No. Due to population size, CEE countries have much smaller economic scale and trading capability compared to China. Obviously, the population size of CEE countries can’t fulfil massive production of China. At the same time, China is actively promoting and implementing investment in this region. Thus, for infrastructure construction generated by the 16+1 Mechanism, I may presume that main purposes of them is definitely not distributing excess production from China.

Here are two purposes generated by analysis of bilateral trading environment between China and CEE countries. One is for accelerating delivery of trading products to European markets, as China is EU’s largest imports origin, while second largest exports market.

another is for facilitating further China’s overseas production. Since I’ve commented CEE countries endow high-skilled human capital, meanwhile they’re receiving rapidly increasing FDI from China. From respect of economic growth and industry upgrade, China tends to speed up investment in Central and East European region, both for its ideal geographical location and high-quality human capital. Chinese enterprises with expanding worldwide strategy would probably follow business path of Japanese, German, American ones, transfer their production to CEE countries. Like what Wanhua and BYD do in Hungary, Huawei does in Romania, the Great Wall Motors does in Bulgaria, Chinese investment is making CEE countries become new manufactory of China.

2. How can CEE countries optimize bilateral trading environment?
CEE countries experienced severe anaemic economic growth after 2008 financial crisis and European debt crisis, choose to propose “Eastern Opening” for getting more economic ties with Asia and more economic independence from Western Europe. First suggestion, enlarge proportion of exports through comparative advantages on bilateral trades, for instance, raw materials as cooper and iron products, machinery as electronic engines, transportation equipment as vehicle parts and especially cars. Second suggestion, for fostering external investment and capital, expand cooperation on intra-industry trades via FDI from Chinese enterprises. In one way, increase job opportunities and optimize social welfare. As examined by Yang & Chen (2016), the projects of infrastructure construction generated by the 16+1 Mechanism will reduce transportation costs. Thus, in another way, with facilitation of infrastructure construction generated by the 16+1 Mechanism, decreasing trade costs and increasing trade efficiency will surge trade flows of CEE countries’ exports to all over the world. Third suggestion, optimize bilateral trading environment on indicators of trade relevancy. Specifically, CEE countries can focus on three fields. Keep exchange rate of home currency consistent with Euro, to mitigate risk from exchange rate fluctuation. In addition, issue CNY-dominant bounds for adequate CNY reserves in case of soaring trades with China. And lower tariff rates with EU standard, at the same time, diminish non-tariff barriers, as non-EU CEE countries generally implement higher tariff rates to China’s exports than EU countries. The last one, based on the 16+1 Mechanism, enhance bilateral economic and political cooperation. China and CEE countries can issue more policies related to tariff rates, FDI, even free trade area, to improve current trading environment.
3. Will CEE countries become new manufactory of China?

Yes. First, the biggest parts making up China’s exports to CEE countries are machinery and transportation equipment, taking share of 60% in 2007 to 65% in 2015. It definitely goes against the stereotype of China’s exports, loads of primary products. Second, high proportion of intra-industry trades are generated between China and CEE countries, on fields of vehicle parts and chemical products. Since trade costs negatively impacts on trade flows of intra-industry, Chinese enterprises tends to investment manufacturer sector in CEE countries, as cases mentioned in answer of first question. Third, as traditional FDI recipients, CEE countries are endowed with high-quality human capital and excellent geographic location. Not only EU and China are taking large share of bilateral trades, and China’s trading pattern keeps expanding. But also with China’s industry upgrade, the production of higher capital-to-labour ratio will require more skilled and efficient labour force as well as management skills. CEE countries are perfect choices to outsource of Chinese non-primary manufacturing.

5 Conclusion

“Eastern Opening” reflects strong willingness of CEE countries to seek for diversity to economic growth and economic independence instead of relying on western European countries. Belt and Road Initiative manifests vigorous efforts on global economic cooperation and facilitating trade liberalization from China under the background of industry upgrade. Nevertheless, could both stakeholders take advantage of externalities
from the 16+1 Mechanism, find opportunities of trade creation then boom economic benefit and generate social welfare? Applied by this paper, several key indicators have been evaluated as impacts on bilateral trade flows between CEE countries and China, spanning from the fields of fundamental background, economic capability, trading values, composition of trade to trading relevancy. As conclusion, based on analysis of trading environment between China and CEE countries, concrete and thorough understanding can be provided for three research questions verified before. In one way, through dialogic platform provided by the 16+1 Mechanism, China is gaining by trade facilitation and market magnification, while CEE countries are gaining economic diversity and investment enrichment. In another way, China and CEE countries obtain huge capability and potential on manufacturing cooperation via enhanced trading environment and intensified policy interactions.

By and large, a comprehensive and effective infrastructure framework connected by ports, roads and railways would facilitate transportation flows between China and CEE countries. Moreover, the following spill-over effects generated from growing trade opportunities would benefit relevant countries on enhancing economic robustness and social stability overall. All in all, it is predictable that there is huge potential of bilateral trade relationships, and the 16+1 Mechanism is working for materializing, maximizing, optimizing bilateral trades potential between CEE countries and China.
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Appendix

Missing data and data adjustment:

1. Montenegro and Serbia declared the independence in 2006, which leads to no available data for Montenegro and Serbia individually at that year.

2. FDI stock of Serbia and Montenegro in 2006, in total is 200 ten thousand USD. It is divided into 100 ten thousand USD for both equally.

3. Trade value of Slovenia in 2016. (Unavailable data in WITS)

4. the SITC grouped data lack the one of 2006. (Unavailable data in WITS)

5. FDI stocks and inflows miss data of 2016. (Unavailable data in MOFCOM)

6. Tariff rates of China to all CEE countries in 2012 and 2013. (Unavailable data in WITS)

7. Tariff rates of Serbia to China in 2012 and 2014. (Unavailable data in WITS)