

Young Researchers' Section

CAGE Analysis of China's Trade Globalization

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Abstract:

Gravity model of international trade states that trade interaction between two countries is in direct proportion to their size measured by Gross Domestic Product and in inverse proportion to the geographic distance. Conley and Ligon (2001) argued that the relevant economic distance between countries is often not the geographic distance. Thus, this study uses original datasets on economic distance to structure observed variations, to decompose the multidimensional CAGE distance framework of globalization derived from the Newton's Law of gravitation as it applies to China's international interaction, to evaluate bilateral trade patterns in identifying and prioritizing the importance of cross-border flows and differences that accounted for the development of China's global strategies. This study confirms that distance must be accounted for in the decision making of any country's globalization process or any firm's global expansion as the effects on cross-border economic activities are enormous.

Keywords: CAGE framework; China; distance; gravity; international interaction

JEL: F6, F11, F15, F23

1. Introduction

Helpman and Krugman (1987) argued that the Heckscher-Ohlin (H-O) model of international trade was incapable of providing a foundation, and it is theoretically inconsistent with the gravity equation. However, Deardorff (1998) argued that the H-O model, at least in some of the equilibrium that it permits, admits easily of interpretations that accord readily with the gravity equation just as the Linder¹ and Helpman - Krugman hypotheses can be tied to it. He also went further by saying that since many theories can be tied to the gravity model, it is not useful for evaluating the empirical validity of those theories. Meanwhile, in trying to bridge economic theory with empirical tests, the econometric models developed by James (1979), James and Wincoop (2003) and Bergstrand (1985) were grounded in the theories of differentiated goods which measure the gains from trade liberalizations and the magnitude of the border barriers on trade.

Santos Silva and Tenreyro (2011) were in line with Pankaj Ghemawat's CAGE framework when they argued that the gravity model can be extended by including variables to account for language relationships, tariffs, contiguity, access to the sea, colonial history, exchange rate regimes, and other variables of interest.

¹ Linder (1961) proposed an alternative theory that was a possible resolution to the Leontief paradox, which questioned the empirical validity of the H-O theory, predicting that patterns of trade will be determined by the aggregated preferences for goods within countries. The more similar the demand structures of countries, the more they will trade with one another. He stressed that international trade will still occur between two countries having identical preferences and factor endowments which relies on specialization to create a comparative advantage in the production of differentiated goods between the two nations.

The CAGE Distance Framework identifies Cultural, Administrative, Geographic and Economic differences or distances between countries that companies should address when crafting international strategies. It offers a broader view on distance and provides another perspective on the geographic location with the associated risks and opportunities related to global arbitrage. The most distinctive feature of the CAGE framework is that it encompasses the bilateral² attributes of country pairs as well as the unilateral³ attributes of individual countries.⁴

The cross-border integration of China or simply put as globalization has brought about the building up of various kinds of connections across her borders. After the opening-up of its economy to the rest of the world in 1979, the Chinese people began to be prone to obtain goods and services from foreign producers just as domestic ones, and the share of import in domestic consumption increased rapidly, foreign direct investment (FDI) began to flow from USD\$57million in 1980 to USD\$121billion in 2012 representing 8.93% of total world FDI flows and the share of export to GDP took a upward trend from 11% in 1980 to 30.4% before the international financial crises in 2008 and settle at 27% in 2012 (World Bank, 2014; UNCTAD, 2014). The cross-border integration of product markets is not accomplished through trade alone; an obvious alternative is FDI which involves product-specific investment. FDI flow into China like trade soared to unprecedented levels after its open-up. Since then, China's reform as not only brought about trade integration and capital flow with other global partners, but the international people flow intensity has also risen much more modestly over time and the transfer/flow of information through international news media on television, radio and via internet. In order to bring people closer; the existence of international calls and cheap voice over IP (VOIP) with the transformation of the internet through social media has made China and indeed the rest of the world to be much more globalized.

We know trade that is motivated by per capita income disparities seeks to arbitrage across wage levels by exporting labour-intensive products and services from poorer countries to richer countries. Thus, the factor endowment of China gave her a comparative advantage to attract FDI and increase export capacity in a continuous trends.

When relating globalization to the CAGE framework, the analysis is structured around four types of activities for which cross-border integration is evaluated, and importance is placed on (1) Products (and Services) Trade and (2) FDI and other Capital Flows, and emphasis is also given to cross-border flows of (3) People and (4) Information. While the four categories might be treated independently, one should keep in mind that there are important complementarities among them: people flows have been found to stimulate both trade⁵ and information flows (Perkins and Neumayer, 2013); information flows are positively associated with capital flows (Portes and Rey, 2005), and so on.

The multidimensional CAGE distance framework is used in this study to evaluate bilateral trade patterns in identifying and prioritizing the importance of cross-border flows and differences that accounted for the development of China's global strategies. For the distance calibrations, China will be used as the focal country and Hong Kong as the nearer to (1) predict it trade-intensity with Hong Kong of which it has an intense export

² Economic size, physical size, level of development, members of international organizations, corruption index, and financial linkage etc.

³ Factor endowment, labor cost, availability of natural resources etc.

⁴ For an extended treatment of this material, see Ghemawat (2001).

⁵ Doubling the number of immigrants from a particular country is associated with 9% higher imports from that country according to Hatzigeorgiou (2010).

relationship, and (2) as a multiple of chosen country's trade-intensity with a target country that is physically distant and with which the relationship is less intense.

2. Cultural Distance

Cultural anthropologist Edward Hall observed that the analysis of culture could be likened to the task of identifying mushrooms. Because of the nature of the mushrooms, no two experts describe them in precisely the same way, which creates a problem for the rest of us when we are trying to decide whether the specimen in our hands is edible. The Merriam Webster dictionary defined culture as the integrated pattern of human knowledge, belief, and behaviour that is both a result of an integral to the human capacity for learning and transmitting knowledge to succeeding generations. Culture thus consists of language, ideas, beliefs, customs, taboos, codes, institutions, tools, techniques, and works of art, rituals, ceremonies, and symbols. It has played a crucial role in human evolution, allowing human beings to adapt the environment to their own purposes rather than depend solely on natural selection to achieve adaptive success.

The intensity of international people flows has risen much more modestly over time than the intensity of trade and capital flows and migration patterns reflect the persistence of economic gains as a motivator of international people flows (Ghemawat, 2014). Meanwhile, if we explore the Chinese culture through the lens of the 6-D Model, we can get a good overview of the deep drivers of Chinese culture relative to other world cultures. It's amazing how much influence culture has on cross border trade. The Chinese culture is one of the world's oldest cultures. The area in which the culture is dominant covers a large geographical region in eastern Asia with customs and traditions varying greatly between provinces, cities, and even towns. Important components of Chinese culture include literature, music, visual arts, martial arts, cuisine, and religion etc. (Discover China, 2014). Its economy has impressive impact on the world economy. My first observation about its trade is the relationships it shares with most of the countries in the world especially developed countries which can ignore the influence of the cultural distances.

China, with its own linguistic characteristics, has a distinguishable cultural barrier to the rest of the world, yet, with United States "US", it enjoys a love and hate relationship. According to *World Value Survey*, these two countries lie far from each other on traditional/secular-rational values as well as survival/self-expression values, which is also supported in Hofstede's *4 cultural dimensions*, especially for the revised version when long-term/short-term orientation comes into play.

The Chinese share relative similar culture with Hong Kong, Taiwan, South Korea and Japan. Hong Kong been the China's second largest export destination and one of its most intense are supported by a variety of cultural commonalities, including linguistic and business environment commonalities. A common language both facilitates trade directly by easing communication and is also indicative of other cultural similarities that could make products from one country more attractive to buyers in another country. According to the Central Intelligence Agency (CIA) World Factbook, Hong Kong languages are Cantonese (official) 89.5%, English (official) 3.5%, Putonghua (Mandarin) 1.4%, other Chinese dialects 4%, other 1.6% (2011 est.) and their religion is made up of eclectic mixture of local religions of 90%, and Christianity of 10%.

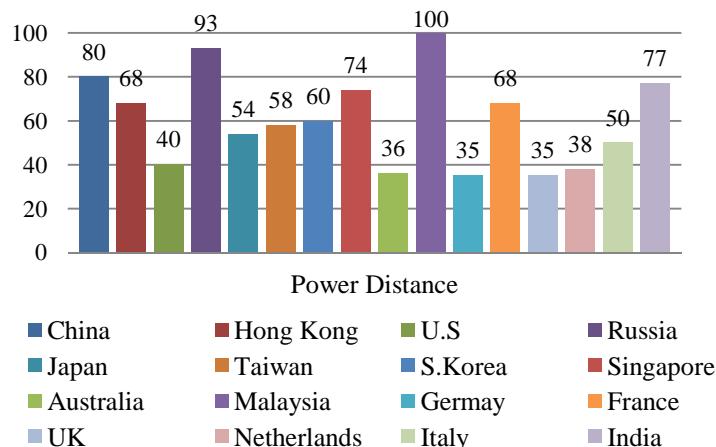
The cultural relationship of China –Russia like the political one has been both fruitful and fraught. Given the two nations long shared border, China's initial introduction to Russian culture came largely through third party nations. Russians began moving to Chinese cities like Harbin and Shanghai and their cultural influence became more direct especially when it came to music, movies, to Chinese medicine and cuisine. In Harbin, Russian musicians founded the First Harbin Music Academy and a 60-person symphony orchestra. Russian musicians also joined the ranks of the Shanghai Symphony and became faculty members at the Shanghai Conservatory after it was founded in 1927, playing a crucial role in training China's first generation of classical musicians.

Australia in the other hand has been a haven for Chinese migrants for centuries who have, in the modern day, established themselves as a significant minority group in Australian society. There are now large numbers of Australian-born Chinese and Chinese-born migrants/Australian citizens in the cities of Melbourne, Sydney, and Brisbane with small Chinese communities in regional centres, particularly in Victoria and New South Wales. There are also Chinatowns in every Australian capital city, including Darwin and large, public Chinese new year celebrations in Melbourne and Sydney. The establishment of many Confucius Institutes with Australia universities in major capital cities has also foster better cultural ties (Confucius Institute Online, 2014).

China-US might not share physical borders or language, however through the United Nations Educational, Scientific and Cultural Organization “UNESCO” both countries have engaged in cultural exchanges. On January 31, 1979, China and the US. signed an agreement on culture cooperation. Since then, six implementation programs on the cultural exchanges were signed successively. The exchanges have been conducted in almost every category of culture and art, and have developed into a multi-channel, multi-level and multi-formed situation. And such exchanges are increasing both in terms of frequency and scale in recent years. In February 1998, the five thousand years' Chinese civilization and art exhibition was held in New York, which was the largest Chinese art exhibition covering the widest range of history ever held overseas by China, with 500 items of art treasure exhibited (China Ministry of Foreign Affairs, 2003).

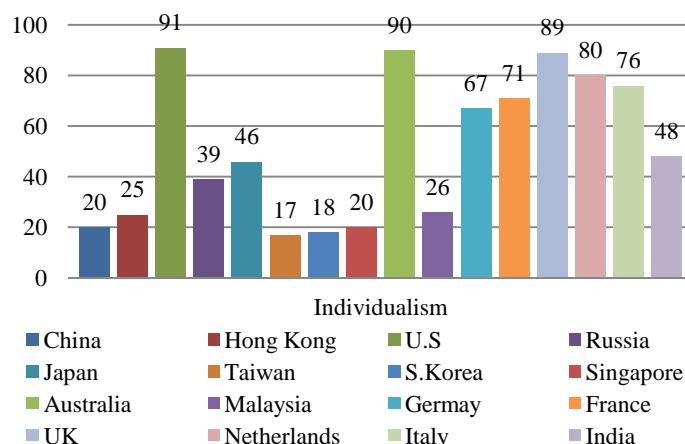
For easy comparison of Chinese culture with its main trade partners, this study chosen a model developed by Dutch management researcher Geert Hofstede and based on his book, *Culture's Consequences* that views culture as the “*software of the mind*” which differentiates one group or society from another. In other words, while all human has the same hardware, their brain and patterns of thinking and behaviours can be very different. Hofstede's cultural dimensions theory is a framework for cross-cultural communication. It describes the effects of a society's culture on the values of its members, and how these values relate to behaviour, using a structure derived from factor analysis to explain observed differences between cultures.

Power distance deals with the fact that all individual in societies are not equal – it expresses the attitude of culture towards inequalities amongst us. It is defined as the extent to which the less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally. At 80 China sits in the higher rankings of power distance after Malaysia and Russia– i.e. a society that believes that inequalities amongst people are acceptable (see Figure 1). The subordinate-superior relationship tends to be polarized and there is no defence against power abuse by superiors. Individuals are influenced by formal authority and sanctions and are in general optimistic about people's capacity for leadership and initiative. People should not have aspirations beyond their ranks.

Figure 1. Power Distance

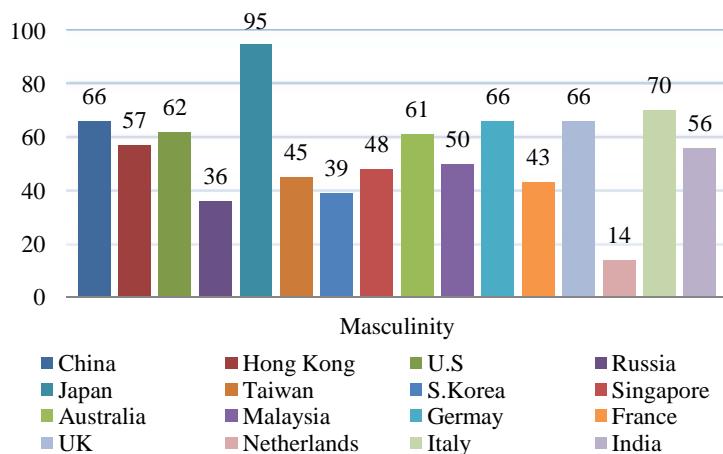
Data Source: Hofstede cultural survey.

Individualism addresses whether people's self-image is defined in terms of "I" or "We". At a score of 20 China is a highly collectivist culture where people act in the interests of the group and not necessarily of themselves (see Figure 2). In-group considerations affect hiring and promotions with closer in-groups (such as family) are getting preferential treatment. Employee commitment to the organization (but not necessarily to the people in the organization) is low. Whereas relationships with colleagues are cooperative for in-groups they are cold or even hostile to out-groups. Personal relationships prevail over task and company.

Figure 2. Individualism

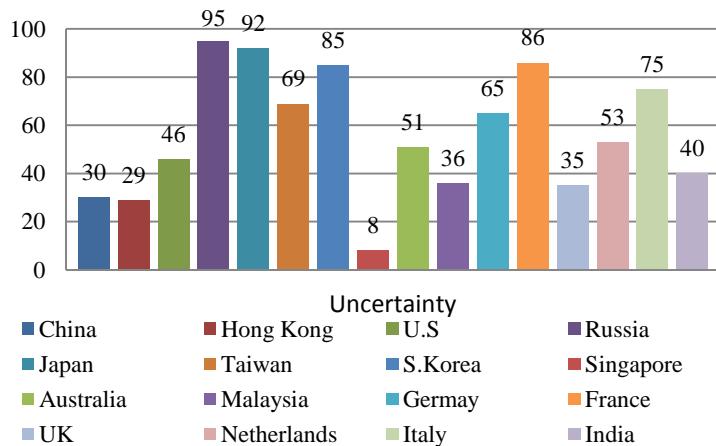
Data Source: Hofstede cultural survey

Masculinity represents another cultural dimension identified by Hofstede. At 66 China is a masculine society –success oriented and driven unlike in a feminine society like the Netherlands where the dominant values are caring for others and quality of life (see Figure 3). In China, the need to ensure success can be exemplified by the fact that many Chinese will sacrifice family and leisure priorities to work. Service people (such as hairdressers) will provide services until very late at night. Leisure time is not so important. The migrated farmer workers will leave their families behind in faraway places in order to obtain better work and pay in the cities. Another example is that Chinese students care very much about their exam scores and ranking as this is the main criteria to achieve success or not.

Figure 3. Masculinity

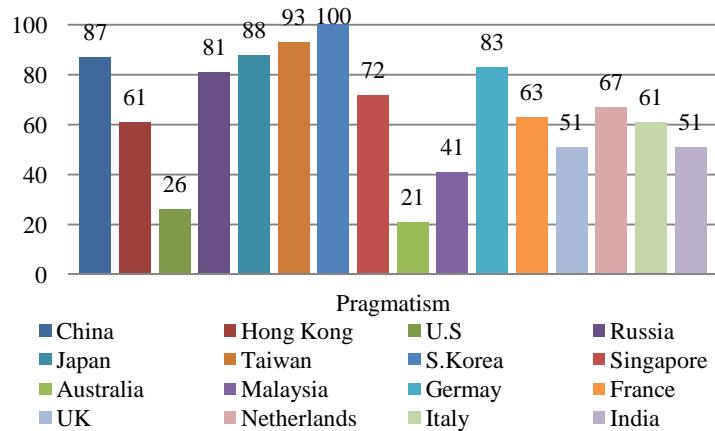
Data Source: Hofstede cultural survey

At 30 China has a low score on **uncertainty avoidance** unlike the Russian with score of 95 that feel very much threatened by ambiguous situations and thus prefers to have context and background information before negotiating (see Figure 4). For China, truth may be relative though in the immediate social circles there is concern for Truth with a capital T and rules (but not necessarily laws) abound. None the less, adherence to laws and rules may be flexible to suit the actual situation and pragmatism is a fact of life. The Chinese are comfortable with ambiguity; the Chinese language is full of ambiguous meanings that can be difficult for Western people to follow. Chinese are adaptable and entrepreneurial. At the time of writing the majority (70% -80%) of Chinese businesses tend to be small to medium sized and family owned.

Figure 4. Uncertainty avoidance

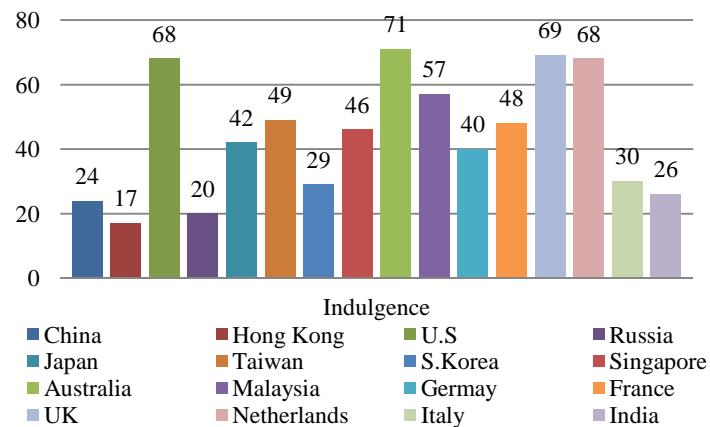
Data Source: Hofstede cultural survey

China scores 87 in on **Pragmatism**, which means that it is a very pragmatic culture like most of the Asia countries under review (see Figure 5). People believe that truth depends very much on situation, context and time. They show an ability to adapt traditions easily to changed conditions, a strong propensity to save and invest thriftiness, and perseverance in achieving results.

Figure 5. Pragmatism

Data Source: Hofstede cultural survey

China's low score of 24 on **Indulgence** reveals a restrained societal format (see Figure 6). Societies with a low score in this dimension have a tendency to cynicism and pessimism. Also, in contrast to indulgent societies like the US, UK, Australia and Netherlands, restrained societies do not put much emphasis on leisure time and control the gratification of their desires. People with this orientation have the perception that their actions are restrained by social norms and feel that indulging themselves is somewhat wrong.

Figure 6. Indulgence

Data Source: Hofstede cultural survey

3. Administrative Distance

China has been increasingly active on the regional trade agreement front since the World Trade Organization WTO accession occurred in 2001. These agreements, unlike the US and EU cases, follow no template form of agreement but vary substantially one among the others and are in part an attempt to customize agreements to partner prior agreements (Chunding *et al.*, 2014). There are presently 12 concluded agreements, 6 under negotiation, and 4 others under consideration. This has helped China to continue in increasing its bilateral trade with even the US and the EU being the second largest trading

partner according to the China Customs, the bilateral trade volume between China and the EU in 2005 reached US\$217.31 billion, up by 22.6% year on year, among which China's export to the EU was US\$143.71 billion, up by 34.1% year on year, while China's import from the EU was US\$73.60 billion, up by 5% year on year.

In 2003, the Central Government of China signed the Closer Economic Partnership Arrangement (CEPA) with the Government of the Special Administrative Region of Hong Kong and Macao respectively. The CEPA is a successful application of the "*One Country, Two Systems*" principle, a free trade agreement signed by the Chinese Central Government with the separate customs territories of Hong Kong and Macao as a new pathway for the institutional cooperation between the mainland, Hong Kong and Macao, and also an important milestone in the economic, trade exchange and cooperation between them.

China and Australia realized in November 2013, that stronger bilateral cooperation would not only benefit the two sides, but help maintain peace, stability and development in the region and worldwide, agreed to accelerate talks over a free trade agreement (FTA). Apart from the fact that South Korea and China held the seventh round of their FTA talks on September 3-5, 2013, South Korea also enjoy a Preferential Trade Agreement called Asia-Pacific Trade Agreement (APTA) formerly known as the Bangkok Agreement that was signed in 1975 as an initiative of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP). Since the implementation of the third round of tariff concession in September 2006, goods covered by preferential treatment were significantly increased, which played a positive role in expanding trade among member countries. In view of the growing importance of the trilateral investment framework to further strengthen the economic partnership among China, South Korea and Japan, the three parties met in December 2013, to further discourse on a FTA in protecting and promoting a free and open trade and investment environment that will effectively assure robust and sustainable development in the three countries.

On the other hand, due to the US trade deficit with China which rises from US\$273.1 billion in 2010 to an all-time high of US\$295.5 billion in 2011, the Obama administration has prioritized domestic reconstruction, redesigning and rebalancing America's foreign strategies in order to revitalize the US economic competitiveness (Dongxiao, 2013). China has been at the "crossfire" with touches on an exceptionally broad range of issues, from security, trade, and broader economic issues, to the environment and human rights. China's rise as the new "economic power house" has thus produced conflict. While working with China to revive the global economy, the US has also wrestled with how to persuade China to address economic policies it sees as denying a level playing field to US firms trading with, and operating in China. However in November 2011, The US and China signed five separate trade contracts for intellectual property rights (Lawrence, 2012), technology, energy, trade statistics and business cooperation. While there are some tensions in China-US relations, there are also many stabilizing factors. China remains US largest foreign creditor and both of them are also major trade partners and have common interests in the prevention and suppression of terrorism and nuclear proliferation. The China-US trade relationship is the second largest in the world, behind the US' trade relationship with Canada.

4. Geographic Distance

China has the longest combined land border in the world measuring 22,117 km (13,743 mi) from the mouth of the Yalu River to the Gulf of Tonkin. The most influential geographic factors explaining Chinese exports towards partners is of course the physical distance in term of river and the common land borders it shares with other 14 nations, more than any other country except Russia, which also borders 14 nations. China extends across much of East Asia, bordering Vietnam, Laos, and Burma in Southeast Asia; India, Bhutan, Nepal and Pakistan in South Asia; Afghanistan, Tajikistan, Kyrgyzstan and Kazakhstan in Central Asia; Russia, Mongolia, and North Korea in Inner Asia and Northeast Asia. Additionally, China shares maritime boundaries with South Korea, Japan, Vietnam, the Philippines and Taiwan.

The Yellow River was as crucial to the emergence of Chinese civilization as the Tigris and Euphrates were for Mesopotamia and the Nile was for Egypt. Having access to a large river provides a natural water supply for people and an irrigation system for crops as well as a nature-made canal for transporting people and goods all around the river-centred civilization. It's no coincidence that all the early civilizations started around large rivers (or river systems) where large-scale agriculture was possible. Due to geographical proximate and border sharing, China-Russia bilateral trade volume reached US\$29.1 billion in 2005, up by 37.1%. Specifically, China's exports to Russia amounted to US\$13.21 billion, up by 45.2% (China Internet Information Center, 2006).

It military coordination also helps secure cargos against pirate on high sea. China's railways, owned by the state, are the busiest in the world, handling a quarter of the world's cargo and passenger travel. Rapid transit systems are also rapidly developing in China's major cities, in the form of networks of underground or light rail systems. China is additionally developing its own satellite navigation system, dubbed Beidou, which began offering commercial navigation services across Asia in 2012, and is planned to offer global coverage by 2020.

When it comes to connectivity, indeed, it is the focus of China's current economic and trade strategy. In order to increase easy flow of trade, China is building east-west relationships, with oil and gas pipelines linking it to Kazakhstan and Turkmenistan. It is building north-south connections to South East Asia, Myanmar and Pakistan. It is trying to rope India into its connectivity strategies through proposals such as the Bangladesh-China-India-Myanmar (BCIM) corridor linking Yunnan with north-east and India promoting east-west connections through Myanmar, Thailand and on to Vietnam, to balance China's north-south connections to South-East Asia (Indian Defense Review, 2014).

The calibrations in Table 1 are based on the coefficient of -1 from a 2013 study by Keith Head and Thierry Mayer. The study provides a summary of the results of 2508 gravity models, drawn from 159 papers. Across all of the models, the median elasticity of trade with respect to physical distance is roughly -1. They compared distance effect estimates drawn from gravity models using data on merchandise trade across time periods ranging from 1960 to 2005 to analyze possible changes in the magnitude of the effects of distance on trade over time, and provide a more sophisticated statistical analysis relating transportation costs to trade costs. This study uses China as the focal country and Hong Kong as the nearer to (1) predict its trade-intensity with Hong Kong of which it has an

intense export relationship, and (2) as a multiple of chosen country's trade-intensity with a target country that is physically distant and with which the relationship is less intense.

To illustrate the magnitude of the distance effects implied by this calibration in Table 1, let consider the intensity of China's exports to the US, Japan, Hong Kong, South Korea, Germany, Netherlands and the UK. The distance between individual countries' major cities from China by air travel in miles. Therefore, the rough assumption that halving distance doubles exports intensity implies that for a distance one-fourth as far such as the EU and Australia, exports intensity should quadruple. Indeed, the intensity of China's exports to the EU countries under review is one-fourth the intensity of China's exports to the Hong Kong. Thus Hong Kong share of China's export in comparison with Germany like any of the other EU countries under review should be the figure of Hong Kong Closeness to China⁶ in comparison to Germany, multiply by Germany percentage share of China's export ($4.03 \times 4 = 16.12\%$). South Korea is 1.18 times the distance from China to Hong Kong, thus Hong Kong's share of China's export should be ($1.18 \times 5 = 5.91\%$) and with Japan of 1.7 times distance, it ought to be ($1.7 \times 8 = 13.61\%$). Also the distance from China to the US is 6.5 times the distance from China to Hong Kong, Hong Kong's share of China's export should appear to be 6.5 times that of the US ($6.5 \times 18 = 117.11\%$).

There are other variable that needs to be considered inasmuch as physical distance is not the only geographic factor that is often incorporated as an explanatory variable in gravity models. As shown in Table 1, US is 6.5 times farther to China in geographic distance when compared with Hong Kong, thus with the CAGE distance coefficient of -1, Hong Kong import from China should implies to be 6.5 times that of US since trade intensity is inversely related to geographic distance (although there are other unexplained variables that still need to be considered) like population, GDP and demand size. If we look at other countries under review, we will see that this method seem well explained, e.g. Japan with distance of 1892 mi and Hong Kong of 1112 mi; Hong Kong is 59% closer to China when compared with Japan (or Japan 1.7times farther) and expected import of Hong Kong will be 13.6% while Hong Kong actual share of China's export being 14%.

Table 1. CAGE Distance

Countries	Distance to China	Hong Kong Closeness to China	Percentage share of China's export	Hong Kong estimated import from China
United States	7233	6.50	18	117.11
Hong Kong	1112	1.00	14	-
Japan	1892	1.70	8	13.61
South Korea	1315	1.18	5	5.91
Germany	4486	4.03	4	16.12
United Kingdom	4831	4.34	3	13.03
Netherlands	4649	4.18	3	12.54
France	4982	4.48	2	8.96
Italy	4699	4.23	2	8.45
Australia	4641	4.17	2	8.35
Russia	1773	1.59	2	3.19
India	1853	1.67	2	3.33
Taiwan	1306	1.17	2	2.35
Malaysia	2190	1.97	2	3.94
Singapore	2383	2.14	2	4.29

Data Source: United Nations Commodity Trade Database (2014); Ghemawat (2011).

⁶ Hong Kong closeness to China in comparison to individual countries is calculated as each country's distance to China divided by Hong Kong's distance to China.

5. Economic Distance

Gravity model suggest that trade should decrease as a result of differences in per capita income as large countries with low levels of per capita GDP and monetization tend to trade proportionately less than others. The true however is that, trade that is motivated by per capita income disparities always seeks to arbitrage across wage levels by exporting labour-intensive products and services from poorer countries to richer countries. Although the formal is true that developed economies tend to trade with other developed ones as emerging or developing economies will trade with one another respectively, since buyers are more likely to afford similar products and share the same taste with similar prices due to their per capita income similarities. Nonetheless, traditional Ricardian and H-O theories also argue that trade can be motivated by differences due to factor endowment as natural resource endowed economies will trade with resource scarce economies.

This analysis uses the ratios of country pairs' per capita incomes (higher divided by lower) to measure the per capita income disparities. With two countries of same per capita income, the ratio is one, and it will increase as their per capita incomes become more different. In accordance with the rule of thumb, halving per capita income disparities implies that the US and China GDP per capita ratio is (47960:6490= 7.39), Hong Kong and China (44790:6490= 6.9), Germany and China (36720:6490=5.66), Singapore and China (5321:6490=8.2) and Netherlands with China will be (41630:6490=6.41).

Table 2 reveals that per capita income differences in the case of China and its global partners are motivated by arbitrage.

Table 2. Income Distance

Countries	GDP, PPP	GDP per capita, PPP	Ratio
Australia	3281462.73	38220	5.89
China	34486692.34	6490	-
France	12047272.6	33940	5.23
Germany	8761602.801	36720	5.66
Hong Kong	8775742.718	44790	6.9
India	1248544.632	3040	-2.13/0.47
Italy	14412648.45	3270	0.5/-2
Japan	7844059.954	33220	5.12
Malaysia	16957538.02	14460	2.23
Netherlands	5263222.105	41630	6.41
Russian	1594462.993	19260	2.97
Singapore	2746750.373	53210	8.2
South Korea	1037842.385	26830	4.13
United Kingdom	58576800	35380	5.45
United States	3281462.73	47960	7.39

Data source: World Bank Statistics (2014)

As the disparities of China's income compare to its partners deepen further, it creates arbitrage for rent seekers to exploit. Take Wal-Mart for example with most discussion on its 4,000 non-US stores versus 3,700 in the US as of year 2009, which generated US\$100 billion in revenues representing one-fourth of the corporate total and US\$5 billion in operating income representing one-fifth of the total due to its global sourcing effort, particularly from China. It is not uncommon for firms to take advantage of arbitrage in

the form of labour-intensive and capital-light manufacturing or even accessing highly skilled workers at lower cost. When considering the order of integration, Singapore with the highest GDP per capita should represent China's largest trade partner followed by the US, then Hong Kong, Australia, Germany, the U.K, France and Japan respectively. Trade that is motivated by per capita income disparities will seek to arbitrage across wage levels by exporting labour-intensive products and services from poorer countries to richer countries.

Table 3. Top 10 China source of foreign direct investment

Countries	Foreign Direct Investment in Billions of US\$	Percentage of total Foreign Direct Investment
Hong Kong	46.311	62.05
Taiwan	5.223	7.00
Singapore	3.924	5.26
Japan	3.027	4.06
United States	2.73	3.66
South Korea	1.955	2.62
United Kingdom	1.276	1.71
Netherlands	0.852	1.14
France	0.815	1.09
Germany	0.688	0.92

Data source: China Ministry of Commerce (2014)

Economic distance is a variable that has the potential to enhance understanding of FDI and the notion “*where your money is, your heart is*” might explain the pattern of China’s export, as the 2010 top 10 countries and regions in terms of actual capital investment in China accounted for 89.5% of its total actual use of foreign capital as shown in (Table 3). Apart from the large amount of Hong Kong’s FDI in China, it also serves as *global hub for offshore renminbi financing and wealth management*. Hong Kong hosts the largest pool of renminbi liquidity outside Mainland China since its launched renminbi business back in 2004 and a comprehensive range of offshore renminbi products and services had been developed to meet the business needs of both local and foreign companies, including financial institutions (Hong Kong Monetary Authority, 2014). It is also good to mention that Hong Kong is the largest recipient of outward direct investment from China, being either the beneficiary or intermediary of about 50% of such investment. Some 30% of China’s trade volume is intermediated by Hong Kong in the form of offshore trade or re-exports.

5. Conclusions

International interactions are disproportionately concentrated among countries that are close to each other culturally, administratively, geographically, and economically. In contrast, countries that are far away from each other along these dimensions are likely to have a relatively little interaction. The CAGE framework as presented above is both quantitative and qualitative method in measuring market potential in relation to differences and similarities. It is a very useful reminder of what differences to keep in mind based on the relevance to the environment and in deciding on where to compete.

Cross-border integration in the case of China, involves the building up of various kinds of connections from trade integration to capital flow, international people flow, information

and technology transfer, and management expertise across its borders. It has benefited immensely from globalization by rapidly industrializing itself into an economic superpower, exploiting its comparative advantage in factor endowment, low labor cost, and wider market (unilateral factors). It also became the best production powerhouse for the multinational enterprise “MNE” and inward FDI became intensively available, coupled with continuous increased export capacity. The WTO accession in 2001 enforced its reforms; the industrialization process quickly transformed a handful of Chinese firms into giants.

The CAGE analysis revealed the implication of distance in China’s trade globalization and how active China is in its international interaction with its main partners in bridging the distance between them with strategic policies, reforms and trade agreements.

The China-Hong Kong story is a good reminder of commonality that could bind two countries together in an unprecedented and unmatched interaction. Due to the “*one country two system*” relationship, the advantage of common language, culture and border sharing is translated into economic prosperity through people flow and trade interaction for both parties. Their relationship is not surprising if we take into account the findings of (Ghemawat, 2011) on “*Law of Distance*” - common language will boost trade twice as much as other countries with different languages even if they have trade agreement. Two countries that share common language, colonial linkage (Cultural dimension), trade agreement (Administrative dimension), and land border (Geographical dimension) in the case of China and Hong Kong are more likely to have 10 times as much trade with each other as two countries that do not share those commonalities. The 14% shares of China’s export translated to 48% of Hong Kong’s total import and in return 52.4% of same was re-exported back to China.⁷ Meanwhile 62% of merchandise mainly manufactured in Hong Kong is also exported to China and their increasing integration through trade, tourism, and financial links, helped Hong Kong to make an initial global financial recovery more quickly than many observers anticipated (CIA World Factbook, 2014).

It is not far fetch to figure out why China has the biggest interaction with the US. Culturally they do not share the same language or tradition; however through UNESCO they engage in a multi-levelled cultural cooperation (Bilateral factor). In 1998 China exhibited 5,000 years’ of Chinese civilization and 500 art treasure items in New York. Administratively, they are both members of WTO and the UN Security Council, working side-by-side on the world map when discussing trade agreement, global diplomacy and also having common interests in the prevention and suppression of terrorism and nuclear proliferation. Geographically speaking, they are far apart with 11646.7 kilometres (7233 miles) from their capital cities;⁸ they are however connected through their well-equipped superior seaports, while the confidence in their infrastructures, transportation system and maritime laws help smoothen trade interaction. Also the physical distance in each country and the size of the population are important geographical factors that need to be reckoned with. The economical dimension of China-US interaction is another important determinant of their relationship. The US with a GDP of 15.68 trillion and China 8.227

⁷ Re-exports of goods refer to products which have previously been imported into Hong Kong and which are re-exported without having undergone in Hong Kong a manufacturing process which has changed permanently the shape, nature, form or utility of the product. Their values are recorded on f.o.b. (free-on-board) basis.

⁸ Pankaj Ghemawat argues that the geographic dimension of distance involves more than just how far two countries are from each other: other attributes to be considered include contiguity, a country’s physical size, within-country distances to borders, access to the ocean, topography, and even time zones, this could as well explain the pattern of trade of China with its top trade partners.

trillion in 2012, which made them the number one and two world economic powers, contributed to the confidence they have in each other. To add to that, China's financing of 23.03% of the US government bonds amounting US\$1.317 trillion as of November 2013 made China the largest foreign creditor of the US (US Department of Treasury, 2014).

The CAGE framework reveals a strong overview of how a country or MNE that wants to invest abroad can identify locations that offer low raw material cost, competitive labor cost, access to consumers and other key decision criteria. Based on a per capita evaluation, Chinese merchandise has attracted Singapore, US, Hong Kong, Netherlands and Australia respectively the countries with the highest per capita income, and by geographic distance, this study reveals how 48% of Hong Kong's import is accounted for as 14% of China's total export. We can also see that China's international expansion or trade globalization strategy is supported by its factor endowment which bridges the distance with its partners.

For firm planning to enter into the Chinese market, this analysis needs to be done at the industry level as there are some components of CAGE that are likely to be best suited for manufacturing industry but not suitable for finance or information technology industry and there are some components that might be profitable for African countries but not European. Having mentioned some generic difference in this study, I can confirm that distance in the form of differences and similarities must be accounted for in the decision making of any country's globalization process or any firm's global expansion as the effects on cross-border economic activities are enormous and do play a crucial role in China's globalization process and strategic policy formulation.

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