

**THE VAGUENESS OF “COUNTRY SPECIFIC ADVANTAGE”  
CONSTRUCT: WHICH HOST-CSAS MATTER FOR THE  
CHINESE OFDI?**

GILMAR MASIERO

*School of Economics, Business and Accounting, University of São Paulo, São Paulo,  
Brazil, 05508-900.*

*E-mail: gilmarmasiero@usp.br (corresponding author)*

FRANCISCO URDINEZ

*Institute of International Relations, University of São Paulo, São Paulo, Brazil, 05508-  
020.*

*E-mail: urdinez@usp.br*

MARIO OGASAVARA

*School of Economics, Business and Accounting, ESPM (Superior School of Advertising  
and Marketing), São Paulo, Brazil 04018-010.*

*E-mail: mario.ogasavara@espm.br*

Editors

Sarianna Lundan; Rob Van Tulder; Alain Verbeke

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RESEARCH PAPER

**Purpose:** The purpose of this chapter is to demonstrate that, despite the extensive literature on firm-specific advantages (FSA) and country-specific advantages (CSA) produced since Rugman’s classic matrix (1981), little progress has been made in empirically operationalizing the second concept.

**Design/methodology/approach:** Through a review of the international business (IB) literature that refers to the CSA concept, we identify the ‘vagueness’ in the usage of this concept. First, we present a concise literature review of the CSA construct, with a link to the ‘double diamond’ theoretical model of Rugman and D’Cruz (1993) and Rugman and Verbeke (1993). Second, we present the results of the bibliographic analysis on the use of the construct by a variety of authors.

**Findings:** We demonstrate the weak conceptual grounding of the CSA concept by reviewing the literature on host-CSAs attracting Chinese overseas foreign direct investment (OFDI). Apart from the fact that various authors use different sources of data, an important reason for contradictory results is the fact that each author tests host-CSA through different indicators. Here, we propose a list of variables and indicators based on the ‘double diamond’ model and test these empirically.

**Originality/value:** IB researchers should start conducting serious studies on home-CSAs and host-CSAs instrumental to attracting investments, defining clear indicators and using replicable data based on publicly available information. This chapter is the first to show that the concepts developed by Rugman (1981) and expanded by Rugman and Verbeke (2008) are relevant to advance in the quantitative operationalization of concepts within IB theory.

**KEY WORDS:** Country-specific Advantages, International Business Theory, Outward Foreign Direct Investments.

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## INTRODUCTION

Despite the extensive literature on firm-specific advantages (FSA) and country-specific advantages (CSA) introduced by the classical Rugman matrix (1981) and extended by Rugman and D’Cruz (1993) and Rugman and Verbeke (1993) little progress has been made in the effort to measure the CSA concept empirically. Whereas the concept of FSAs has continued to be measured and developed by researchers of the resource-based view of the firm, such as Wernerfelt (1984), Peteraf (1993) and Barney (1991, 2001), the intuitively rich concept of CSA has been understudied by International Business (IB) researchers over the last three decades.

Based on a review of the IB literature referring to the concept of CSA, we conclude that the term has been only vaguely defined. Our chapter seeks to more precisely measure this concept and test its effects in five sections. First, we present a concise literature review of the CSA construct, including its extension in Rugman and D’Cruz’s (1993) and Rugman and Verbeke’s (1993) ‘double diamond’ model. Second, we present the results of the bibliography analysis on the use of the construct by other authors. Third, we illustrate the vagueness of the construct through the review of the literature on host CSA attracting Chinese OFDI. Apart from the fact that authors use different sources of data, a main reason for opposite results has to do with the fact that each test host CSA through different indicators. Fourth, we test empirically a set of commonly used host CSA on Chinese OFDI. Finally, we conclude highlighting the relevance of our discussion to the theory of International Business. All these sections are developed to answer our research question: What do Chinese multinational enterprises (MNEs) care about when investing in foreign markets?

## WHAT IS A COUNTRY-SPECIFIC ADVANTAGE?

The motivations for our study depart from *Fifty years of International Business Theory and Beyond* (Rugman, Verbeke, & Nguyen, 2011). The work will be a classic in years to come due to its excellent synthesis. However, what this paper reveals is that a whole theoretical structure has been built on what we believe is a concept not thoroughly empirically tested: Country-Specific Advantages.

Even though pioneering works, such as Vernon (1966), Dunning (1958) and Rugman (1980), had included country-specific factors as part of their analysis, these studies had limited their understanding to examining how country-specific factors served as a channel to facilitate learning by MNE and how these learning effects were then employed in international markets (Rugman et al., 2011). That is, the CSAs were seen as FSAs enhancers. The focus in the 1980s was directed at FSA.

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Internationalization theory economists, such as Buckley and Casson (1976), and Rugman (1981), have developed important explanations about why firms become involved in international production highlighting that foreign direct investment (FDI) should not be analyzed solely at the country-level, but also at the firm level, i.e., the MNE (Rugman et al., 2011). Multinational firms became the prominent source of FDI inflows and outflows into developed and developing countries as part of the wave of globalization of the 1990s and the first decade of the 2000. Following this viewpoint, internationalization theory scholars emphasized that profit-maximizing firms may seek to internalize their acquisition of intermediate goods and intangible assets of technology, brand, management expertise, etc. across national borders (Buckley & Casson, 2009). They have been doing this due to the market imperfections of the pricing of intermediate goods, information asymmetries, the lack of future markets and many other public goods externalities associated with the government interventions and trade barriers of different national economies. However, Rugman has himself questioned internationalization theory stating that it “lacks serious conceptual grounding and generalizability [...]” (Rugman et al., 2011, p. 14), particularly a clear definition with regards to geographic proximity of experiential learning and which of these concepts impact the decision of FDI and the spread of geographic sales.

In short, the literature lacks clarity on which variables can be used to measure the concept of CSAs. In fact, it seems that there is no such discussion. Rugman’s definition of CSA is that they are “the natural resource endowments (minerals, energy, forests, etc.), the quality and quantity of labor force, and associated cultural factors” (Rugman, 2005, p. 34; Rugman, 2007, p. 334; Rugman, 2011, p. 221). The author recognizes both Home and Host CSA to be important for an accurate analysis and gives a more detailed definition of (Host) CSAs when combining it with Dunning’s OLI framework (i.e., Location advantages) (Rugman, 2010). In other words, what matters is the host country advantages related to market size, natural resources, infrastructure aspects, education system, governance structures and other aspects of political and government activity.

Rugman and D’Cruz (1993) and Rugman and Verbeke (2003) considered the CSAs variables in depth based on Porter's diamond. They explain how CSAs are divided into Host and Home factors, and are formed by four variables, namely, Supporting Industries, Factor Conditions (Resources), Demand Conditions (Customers) and Government Conditions. The following Figure 1 summarizes what they called “double-diamond model” (DDM).

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**Figure 1 around here**

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Rugman and D’Cruz (1993) and Rugman and Verbeke (2003) adopted Porter’s terminology to clarify how countries explore their CSAs, but since these papers’ publication, these dimensions have not yet been tested empirically, perhaps with the sole exception of Moon, Rugman and Verbeke (2006). We argue that it is vital to develop a metric to compare results as well as to validate constructs and concepts.

## CSAs IN THE LITERATURE

We undertook a bibliographic analysis to better understand the development of CSA construct in the literature. First, we searched for articles using wide-ranging academic databases such as EBSCO, Science Direct, JSTOR, Sage, Emerald, Scielo, Spell and Google Scholar. We researched academic peer-reviewed articles and found only three papers containing “Country-Specific Advantages” in its title (Shan & Hamilton, 1991; Nachum & Rolle, 1999; De Beule & Duanmu, 2012), while 176 peer-reviewed papers containing that expression in the title or body of the work.<sup>1</sup>

Second, the selected papers had to fulfill the following points to be included in our bibliographic analysis: (a) use the concept explicitly, (b) define the concept with variables, or (c) try to test it empirically. Among the 176 papers, we only found thirteen that satisfied our specified criteria. The details are depicted in Table 1.

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**Insert Table 1 around here**

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Many papers focus on home or host determinants of OFDI, but few refer to Rugman’s theory. For instance, Luo, Wang and Lu (2012) show, using a survey of 153 MNEs from China, that Chinese overseas investment strategies are influenced by home country environment parameters, traits including economic growth, institutional perceived hardship, competitive pressure, and by their home country operational characteristics, including inward internationalization, innovation orientation, and business development stage. Despite citing an interest in understanding the effect of Rugman’s CSA concept,

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<sup>1</sup> In Google Scholar, the same search found six papers containing “Country-Specific Advantages” in its title, and 574 papers containing that expression in the body of the work, but most of these are secondary references. The three paper difference between both results has to do with the fact that Google Scholar included Rugman’s works, which contained the expression in the title.

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the authors make inferences about *Home Country Effects* without providing a definition of which variables measure this factor and its effect on FDI.

Among the academic sample selected, only four papers define CSAs with testable variables (Ramamurti 2008; De Beule & Duanmu 2012; Buckley, Forsans & Munjal, 2012; Cho, Moon & Kim, 2009). Ramamurti (2008) defines ten CSAs variables, but does not test them econometrically. De Beule and Duanmu (2012) analyze how country-, industry- and firm-specific determinants affect Chinese and Indian acquisitions and test eleven CSAs variables: Market Size, Market Wealth (GDP per capita), Market Openness, Resources (percentage of ores and metals exports to total merchandise exports by country), Patents, Trademarks, Political Stability, Rule of Law, Control of Corruption, Regulatory Quality, and Geographical Distance. While better rule of law, regulatory quality and control of corruption are found to be important for India’s although not for China’s acquisitions, political stability proves to be a negative estimator for both countries.

Buckley et al. (2012) examine the complementarity of country-specific linkages with country advantages to explain the foreign acquisitions of Indian MNEs. In order to adjust for the shortcomings of the CSAs concept, these authors also use the Eclectic Paradigm (Dunning 1977; 1980; 1985). In order to evaluate home country-specific advantages, the authors examine three determinants of MNE capital investment: domestic capital market, foreign exchange rate of the Indian Rupee against the US Dollar, and language proficiency. They find that all these factors are significant and have an expected positive sign helping to explain the level of foreign acquisitions made by Indian MNEs.

In order to examine the effect of locational advantages, the authors consider three sets of determinants: market seeking motives, endowment of natural resources and endowment of knowledge assets. Their preliminary results confirm the significance of host country’s market size. In other words, market-seeking motives measured by the size of the host country’s market are significant. As natural resources endowments are not found to be statistically significant, the authors posit that “[...] India might not have reached the point in its development process where it needs to import large amounts of natural resources yet, unlike China.” (Buckley et al. 2012, p. 888).

## WHAT ARE THE IMPLICATIONS OF THE LACK OF PRECISION?

The lack of empirical definition of CSAs can lead to opposite conclusions since each author uses a different set of indicators. Some IB authors have pointed out the particularities of Chinese OFDI, suggesting that this case might offer refinements to established theories or even their refutation (Liu, Buck & Shu, 2005; Ramasamy, Yeung & Laforet, 2012; Li-Ying, Stucchi, Visholm & Jansen, 2013).

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In the remainder of this chapter, we delve further into the literature on CSA determinants of Chinese OFDI to precisely explore these contradictions and the questions they raise for IB research.

Based on our review, we believe that the literature arrives at different results not only because of the use of different sources of data, but mainly, because of the different indicators chosen to test the host-country determinants of investments. There is a rich literature regarding Chinese OFDI, especially since 2005, but these studies employ different indicators to empirically test the same hypotheses. As we discuss below, these differences are important and merit further exploration.

China is no longer a mere recipient of FDI, but has become in recent years an active investor in the world. In 2013, three of the ten largest companies in the world were Chinese (Sinopec Group, China National Petroleum and State Grid), and the Forbes Global 500 includes 73 Chinese companies. That is nearly 15% of the largest 500.

Liu et al. (2005) reject the idea that Chinese OFDI is a *sui generis* case. They test their model with a GMM regression and their results suggest that the level of economic development, measured by GDP per capita plus human capital, is still the main factor explaining China’s rate of OFDI, as it is for other countries. They also found OFDI to be positively influenced by the value of local investments in human capital, which is a determinant of OFDI for other countries.

Morck et al. (2008) assert that China’s outward investment is mostly driven by acquisitions in neighboring Asian countries and resource-rich parts of Africa. In those acquisitions, natural resources appear to be critical, as Asian and African countries are gaining relevance. Thus, China is depicted as a resource-seeker that invests in countries with weak macroeconomic environments.

Buckley et al. (2007) have written an insightful paper in this area. Building on Liu et al. (2005), their motivation was to test the extent to which the mainstream theory that explains industrialized country FDI is applicable to emerging country contexts and whether special explanations nested within the general theory are needed. Through OLS regressions, these authors conclude that Chinese OFDI is associated with host natural resources endowments. However, these authors chose to measure these assets through data on host country’s exports of ores and minerals, excluding energy and food investments. They find Chinese OFDI to be associated with high levels of political risk in, and cultural proximity to, host countries throughout, along with host market size and geographic proximity. In this sense, the authors are closer to Morck et al. (2008).

Cui and Jiang (2009) develop a case study based on ten Chinese outward investing firms. Their paper examines ownership with a focus on the choice between a wholly owned subsidiary (WOS) and a joint venture (JV) entry mode. They found that Chinese firms invest overseas to seek various strategic

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assets, and a full ownership structure (WOS) is considered a proper way to organize. Chinese firms invest overseas to seek technology and brand-related assets to enhance their competitiveness. These companies favor WOS as it is more effective than JV in terms of acquiring, utilizing, and transferring desired assets. Chinese firms value a good relationship with the host country government, and try to establish a harmonious social status within the host country, thereby trying to avoid an exploitative reputation. The CSAs that attract investments differ depending on whether a venture is a WOS or a JV. The authors show that investment decisions are also explained by whether the Chinese enterprise is a State-Owned Enterprise (SOE) or a Privately-Owned Enterprise (POE).

Ramasamy et al. (2012) argue that Chinese firms seem to be investing into countries that do not fit the standard profile of host locations. They test, through a Poisson count data regression model, that Chinese OFDI is attracted to countries, which possess large supply of natural resources. They categorize the firms into state-controlled and privately owned according to majority ownership. Afterwards, they report that the determinants of internationalization differ based on ownership: State-controlled firms are attracted to countries with large sources of natural resources and risky political environments. Private firms are more market seekers. This thought-provoking work also measured “Natural Resources Endowments” using data on host countries exports of ores and minerals as Liu et al. (2005) did.

Li (2012) finds that Chinese OFDI generally follows what is predicted by mainstream direct investment theory in terms of host country GDP and geographic distance to parent country, indicating that Chinese OFDI is sensitive to market size and costs. This study also reports strong evidence that Chinese OFDI is attracted to countries with abundant natural resources.

Finally, Li-Ying et al. (2013) chose two Chinese firms that just had started investing and a third one that was in the process of preparing to invest in Denmark. The authors inquire on whether new theories are needed or whether updating the profound and long-tested existing theories of international business to serve a new era of OFDI from emerging markets firms will be sufficient. In contrast to other studies, they cite Rugman, arguing that strategic asset-seeking OFDIs were supposed to have high levels of FSAs and CSAs.

Using Dunning’s theory, their study presented a more detailed analysis regarding the O, L and I advantages that Chinese investing firms in Denmark are perceived to possess and found that these Chinese investing firms had high levels of O<sub>a</sub> (Asset-based ownership advantage) and O<sub>i</sub> (Institution-based ownership advantage) but O<sub>t</sub> (Transaction-based ownership advantage) was largely absent.

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Furthermore, although Lr (Resource-based L advantages) was obviously appreciated in Denmark, Li (Institution-based L advantages) presented a mixed picture.

As we have tried to exemplify, since 2005 several investigations on CSA determining Chinese OFDI have been done and there is not much consensus across these results, except for the relevance of natural resources endowments, which has been measured through dubious indicators and which only seem to attract SOE, and not POE which are more market-seekers (Morck et al., 2008). By using a clear definition of CSA, empirical research in the area of IB would be more aligned.

In an attempt to standardize the use of CSA indicators and provide a contribution to the literature, we propose some variables and indicators based on the “double diamond” model (Rugman & D’Cruz, 1993; Rugman & Verbeke, 2003). We employ these measures on Chinese OFDI cases, which are described in the following section. Using these variables, we seek to investigate “Chinese CSAs” (Rugman & Li, 2007) and try to answer the research question: What do Chinese MNEs care about when investing in foreign markets?

### DATA ANALYSIS AND METHOD

As compared with past empirical work, we believe our specification is more robust as it attempts to fully capture the usefulness of the CSA construct, a task thus far incompletely explored in past research. We tested our hypotheses by operationalizing the four variables in Rugman and Cruz’s (1993) and Rugman and Verbeke’s (2003) DDM. The method used to test our model was Ordinary Least Squares (OLS) Regression with Robust Standard Errors to control for heteroskedasticity, which was tested using the Breusch-Pagan / Cook-Weisberg test. The baseline model of this work can be summarized as:

$$\begin{aligned} \text{Total Chinese OFDI}_i = & \beta_0 + \beta_1 \text{ Endowed Resources (X}_{i1}) + \beta_2 \text{ Supporting Industries (X}_{i2}) \\ & + \beta_3 \text{ Domestic Demand (X}_{i3}) + \beta_4 \text{ Government Conditions (X}_{i4}) + \\ & \varepsilon_i \end{aligned}$$

The dependent variable, Total Chinese OFDI, measures the “*Sum of Chinese OFDI received per country between 2005 and 2012*” was created using the Heritage Foundation’s China Global Investment Tracker. This is the only publicly available Chinese OFDI base, which has the advantage that its information can be replicated by all interested readers. Its data is gathered by monitoring companies and foreign sources are also used for data collection. The sample period we considered

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(2005 to 2012) was determined by the availability of data from this source. An advantage of this database is that it includes information on transactions of failed and successful Chinese investments, which may overstate the amount of capital inflows. Many projects are announced and never concretized. On the other hand, a caveat of this data sources is that it only registers transactions valued at more than \$100 million thereby excluding small projects. Another warning is that only investments announced and published in English sources are included in the database. We base our findings on a sample of 96 countries<sup>2</sup>.

The independent variables use “objective” data (World Bank Data, Correlates of War and World Distance Calculator) and more “subjective” data (World Economic Forum). We believe that the latter has three advantages over the former and has therefore been included. First, its indicators are created based on a mixture of, on the one hand, statistical data from recognized agencies, notably the United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Monetary Fund (IMF), and the World Health Organization (WHO). The alternative source is based on the World Economic Forum's annual Executive Opinion Survey, which collects an average of a hundred respondents per country making it the largest poll of its kind, collecting the insight of more than 14,000 business executives. Second, the country coverage is extensive and all the 96 countries in our study are included, something that does not happen with other data sources. Third, the subjectivity of the executives is a valuable insight since foreign investment decisions are also based on subjective factors. Therefore, our model contains four independent variables related to Endowment Resources, Supporting Industries, Domestic Demand and Government Conditions that are described in detail in Table 2.

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**Insert Table 2 around here**

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Finally, we include a control variable that measures the geographical distance in kilometers between Beijing to the host country's capital.

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<sup>2</sup> The distribution of the sample of 96 countries by geographical region is as follows: South America (11%), Caribbean (4%), North America (3%), Europe (18%), Middle East (13%), Northern Eurasia (15%), Oceania (3%), North Africa (5%), Sub-Saharan Africa (15%), Southern Africa (7%), and Other (6%).

## THE VAGUENESS OF THE “COUNTRY SPECIFIC ADVANTAGE” CONSTRUCT RESULTS

Our baseline regression is presented in column 1 of Table 3. It reveals that natural resources are an important driver of Chinese OFDI and that specifically energy production is key. The remaining results presented in Table 5 have three variants, in which with each column, an additional set of measures of the model is added to Endowed Resources. Column 4, the reader will notice, corresponds to the DDM proposed by Rugman and D'Cruz (1993) and Rugman and Verbeke (2003). The number of observations among the four columns vary due to missing data in some independent variables.

From an empirical standpoint, our results call into question the necessity of employing more comprehensive measures to capture CSAs. Only one of the nine indicators of Related & Supporting Industries ( $X_{i2}$ ), none of the seven indicators of Domestic Demand ( $X_{i3}$ ), and only one of the seven indicators of Government Conditions ( $X_{i4}$ ) were statistical significant in our regression model.

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**Insert Table 3 around here**

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The effect of energy production, measured as *average thousand kt of oil equivalent*<sup>3</sup> is positive and statistical significance in all four columns, which is at first glance promising. However, as McCloskey (1998) notes, statistical significance does not necessarily mean scientific significance. When the coefficient is evaluated in terms of its magnitude, we see that, other things being equal, a country endowed with a 100,000 kt of oil per year, or equivalent, is predicted to receive US\$ 2974 million on average in Chinese OFDI. However, using the 95% confidence interval, the preciseness of this effect can be as high as US\$4174 or as low as US\$ 1774.

The explanatory power of this variable is astonishing as it can predict around 73% of total Chinese OFDI received among the “Top 15 receivers”. When we compared the predicted value to the observed investment only in the Energy Sector, the former over predicts the latter by just 7.7%. The main destinations of OFDI in energy projects were Canada (33.1 billion), Australia (23 billion), Brazil (19 billion), USA (14.4 billion) and Iran (13.7 billion). The most prominent investors were CNOOC and Sinopec.

Our results are in agreement with those of Ramasamy et al. (2012), Li (2012) and Buckley et al. (2007) in highlighting the relevance of natural endowments. However, our findings more precisely

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<sup>3</sup> Refers to forms of primary energy--petroleum (crude oil, natural gas liquids, and oil from nonconventional sources), natural gas, solid fuels (coal, lignite, and other derived fuels), and combustible renewables and waste--and primary electricity, all converted into oil equivalents.

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call attention to the relevance of the energetic variable over other natural resources as the key determinant of CSAs.

Iron and steel production, measured as thousands of tons produced in 2007<sup>4</sup> has statistical significance, but its explanatory power is much lower. Moreover, the sign of the coefficient for these variables is negative. This suggests, counter intuitively, that the production of iron and steel was not a motivating CSA after controlling for other factors. This was an unexpected result as many authors have called attention to the high demand of steel and iron by China for sustain urbanization as a key determinant of internationalization (Guob & Fu, 2010; Shen et al., 2005). Furthermore, as was observed in Table 3, 16% of total OFDI was directed for mining projects. The reason of this counterintuitive result can be explained by the fact that only four observations in the sample (Australia, Indonesia, DRC and Peru) concentrate 52% of total investments in mining projects.

The host country’s macroeconomic environment<sup>5</sup> was also statistically significant. Its sign is negative, suggesting that many Chinese flows went to unstable economies with poor macroeconomic environments. This finding is comprehensible and confirms the arguments of other authors about the growing importance of Africa and Latin America in Chinese investments (Morck et al., 2008). The same should be said about the time to pay taxes<sup>6</sup>, which has a positive signal, reinforcing the idea that Chinese investments have grown in underdeveloped countries with weak institutions (Li, 2012).

Contrary to the findings of Buckley et al. (2007), geographical distance was not significant in the model. Unlike trade flows, investments are insensitive to geographical distances, especially when it comes to tracing natural resources around the globe. Contrary to Liu et al. (2005) we did not find GDP per capita, nor human capital indicators (such as Primary Education and Quantity of Education) to be statistically significant. As in Mudambi (1995), risk and infrastructural factors (such as roads paved, transport infrastructure and quality of education) were found to be relatively ineffective in explaining the location of Chinese investment. Policy variables, such as Total Tax Rate and Public Institutions, were also not significant.

## CONCLUSIONS

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<sup>4</sup> The inter-annual variance is minimal and there are no significant differences with data between 2005 and 2012.

<sup>5</sup> Indicator created by the Global Competitiveness Index measured by: (a) General government budget balance as a percentage of GDP; (b) Gross national savings as a percentage of GDP; (c) Annual percent change in consumer price index (year average); (d) Gross general government debt as a percentage of GDP; and (e) Expert assessment of the probability of sovereign debt default on a 0–100 (lowest probability) scale.

<sup>6</sup> Based on World Bank Data data, time to prepare and pay taxes is the time, in hours per year, it takes to prepare, file, and pay (or withhold) three major types of taxes: the corporate income tax, the value added or sales tax, and labor taxes, including payroll taxes and social security contributions.

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By advancing the use of quantitative testing concepts of IB theories, we show that theories need to be more robustly tested for the progress of the field. To date, the CSA construct has remained a vague concept and arbitrary variables have been used for its measurement. Of the 176 papers that use the construct, only thirteen attempted to test it empirically or to define it in specific terms.

In order to understand the effects of home and host CSA, we propose a set of indicators that measure the term and its multiple dimensions with more conceptual rigor. We then showed results of a single case study on how CSAs help to explain Chinese OFDI. At least for this case, the CSA construct has very limited explanatory power. Not all aspects of the CSA construct are relevant to explaining Chinese OFDI, and even more worrisome, the investment pattern is largely driven by a single variable, energy endowments. Our results clearly point to the need for more robust testing of the measure within and across cases.

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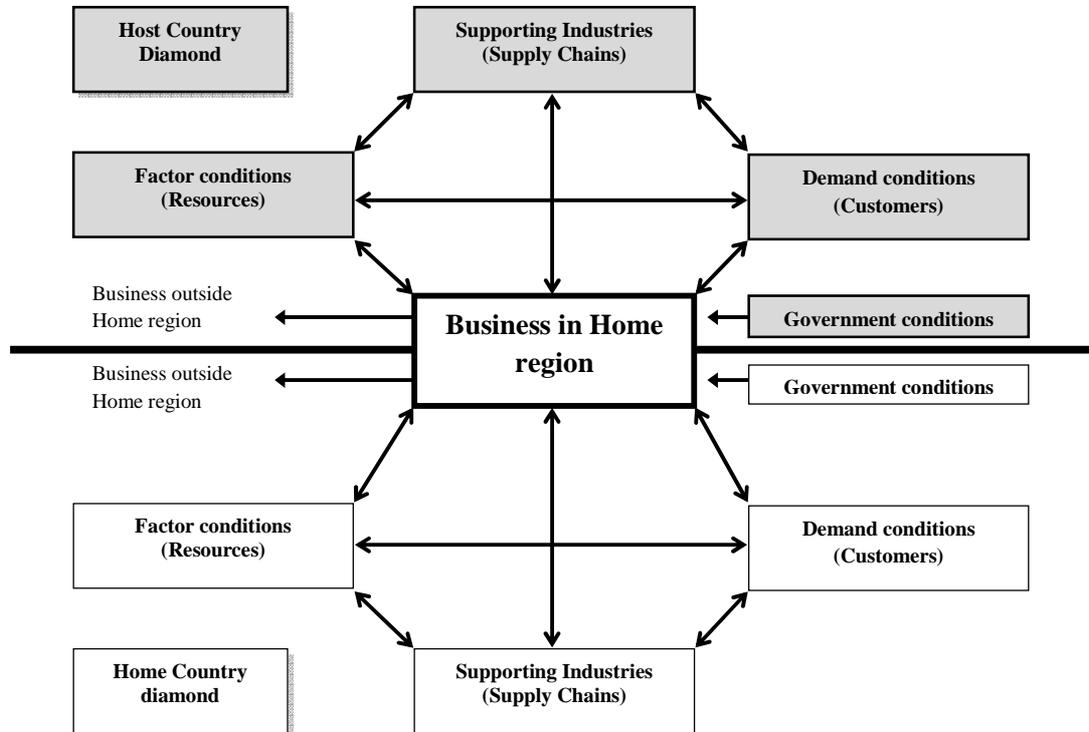
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**Figure 1: Double Diamond Model**



Source: Rugman and D’Cruz (1993)

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**Table 1: Major Studies Employing CSA concept**

TITLE	AUTHOR(S)/YEAR	JOURNAL	USE OF CSA CONCEPT	DEFINE CSA VARIABLES	TEST CSAs
"Country-Specific Advantage and International Cooperation"	Shan & Hamilton (1991)	Strategic Management Journal	✓	-	✓
"Home country and firm-specific ownership advantages A study of US, UK and French advertising agencies."	Nachum & Rolle (1999)	International Business Review	✓	-	-
"Transforming Disadvantages into Advantages: Developing-Country MNEs in the Least Developed Countries"	Cuervo-Cazurra & Genc (2007)	Journal of International Business Studies	✓	-	✓
"Does one size fit all? A dual double diamond approach to country-specific advantages"	Cho, Moon & Kim (2009)	Asian Business & Management	✓	✓	✓
"What Have We Learned About Emerging-Market MNEs?"	Ramamurti (2008).	For presentation at a conference	✓	✓	-
"Market Characteristics and Regionalisation Patterns"	Seno-Aldai (2009)	European Management Journal	✓	-	-
"The Evolution of Country and Firm Specific Advantages and Disadvantages in the Process of Chinese Firm Internationalization."	Marinova Child & Marinov (2011)	Advances in International Management	✓	-	-
"EMNEs and Knowledge-seeking FDI"	Kedia, Gaffney & Clampit (2012)	Management International Review	✓	-	-
"Host-home country linkages and host-home country specific advantages as determinants of foreign acquisition by Indian firms"	Buckley, Forsans & Munjal (2012)	International Business Review	✓	✓	✓
"Why MNCs tend to concentrate their activities in their home region"	Wolf, Dunemann & Egelhoff (2012)	Multinational Business Review	✓	-	-
"Locational determinants of internationalization: A firm-level analysis of Chinese and Indian acquisitions"	De Beule & Duanmu (2012)	European Management Journal	✓	✓	✓
"Foreign Direct Investment Strategies by Developing Country Multinationals: A Diagnostic Model for Home Country Effects"	Luo, Wang & Lu (2012)	Global Strategy Journal	✓	-	✓

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"Home Country Determinants of Outward FDI from Developing Countries"

Das (2013)

Margin: The Journal of Applied Economic Research

✓

-

✓



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**Table 2: Proposed Indicators to test which CSA attract Chinese OFDI**

VARIABLES	INDICATORS	EXPECTED SIGN (BASED ON LITERATURE)	DATA SOURCES
<b>Total sum of Chinese OFDI received per country (<math>Y_{it}</math>)</b>	Expressed as the amount of FDI received from Chinese MNEs in million US\$.	-	Heritage Foundation China Global Investment Tracker
<b>Natural Endowed Resources (<math>X_{i1}</math>)</b>	<ul style="list-style-type: none"> <li>a. Cereal yield (kg per hectare)</li> <li>b. Land under cereal production (thousand hectares)</li> <li>c. Forest area (thousand sq. Km)</li> <li>d. Energy production (thousand kt of oil equivalent)</li> <li>e. Iron and steel production (thousands of tons)</li> </ul>	<b>Positive</b>	World Bank Data, and Correlates of War
<b>Related &amp; Supporting Industries (<math>X_{i2}</math>)</b>	<ul style="list-style-type: none"> <li>f. Transport infrastructure (score between 0 and 7)</li> <li>g. Electricity and telephony infrastructure (score between 0 and 7)</li> <li>h. Trustworthiness and confidence (score between 0 and 7)</li> <li>i. Technological adoption (score between 0 and 7)</li> <li>j. Macroeconomic environment (score between 0 and 7)</li> <li>k. Roads, paved (% of total roads, latest available value)</li> <li>l. Private Institutions Quality (score between 0 and 7)</li> <li>m. Trade in services (% of GDP)</li> <li>n. Ease of doing business rank (1=most business-friendly regulations, 180= least business-friendly regulations)</li> </ul>	<b>Negative</b>	World Economic Forum Global Competitiveness Index and World Bank Data
<b>Domestic Demand (<math>X_{i3}</math>)</b>	<ul style="list-style-type: none"> <li>o. Competition (score between 0 and 7)</li> <li>p. Quality of demand conditions (score between 0 and 7)</li> <li>q. Domestic market size (score between 0 and 7)</li> <li>r. Business sophistication (score between 0 and 7)</li> <li>s. GDP per capita (current US\$, average 2005 - 2012)</li> <li>t. Inflation, consumer prices (annual % )</li> <li>u. Unemployment, total (% of total labor force)</li> </ul>	<b>?</b>	World Economic Forum Global Competitiveness Index and World Bank Data
<b>Government Conditions (<math>X_{i4}</math>)</b>	<ul style="list-style-type: none"> <li>v. Health (score between 0 and 7)</li> <li>w. Primary education (score between 0 and 7)</li> <li>x. Quantity of education (score between 0 and 7)</li> <li>y. Public Institutions Quality (score between 0 and 7)</li> <li>z. Total tax rate (% of commercial profits)</li> <li>aa. Time to prepare and pay taxes (hours)</li> <li>bb. Time required to enforce a contract (days)</li> </ul>	<b>Negative</b>	World Economic Forum Global Competitiveness Index and World Bank Data
<b>Distance (Control Variable)</b>	Kms between Beijing and the country’s capital.	<b>Positive</b>	World Distance Calculator (GlobeFeed.com)

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**Table 3: Econometric Results**

Method: OLS Regression with Robust Standard Errors					
Dependent Variable: Sum of FDI between 2005 and 2012 (US\$)					
	Coefficient	Coefficient	Coefficient	Coefficient	
	t-statistic	t-statistic	t-statistic	t-statistic	
	(1)	(2)	(3)	(4)	
Endowed Resources (X <sub>1</sub> )	Cereal yield	0.172	-0.819	-0.842	-1.029
		0.64	(-1.22)	(-1.27)	(-1.37)
	Land under cereal production	0.0824	0.0678	0.0115	0.0577
		0.66	0.46	0.09	0.47
	Forest area	1.208	0.769	0.457	-0.835
		0.48	0.35	0.22	(-0.44)
	Energy production	23.52***	25.80***	26.05**	29.74***
		3.62	3.43	3.43	4.96
	Iron and steel production	-0.0602	-0.126*	-0.168**	-0.194**
		(-1.41)	(-2.08)	(-2.77)	(-2.88)
Related & Supporting Industries (X <sub>2</sub> )	Transport infrastructure		1700.2	890.2	1633.5
			1.19	0.44	0.68
	Electricity and telephony infrastructure		2374.6	2668.5	1875.3
			1.67	1.57	0.72
	Trustworthiness and confidence		2084.2	2722.8	1698.8
			1.46	1.26	0.57
	Technological adoption		-660.2	-537.7	-1470.6
			(-0.29)	(-0.27)	(-0.52)
	Macroeconomic environment		-1803.8*	-2687.2*	-2700.5*
			(-2.35)	(-2.02)	(-2.16)
	Paved Roads		-70.7	-73	-94.08
			(-1.83)	(-1.53)	(-1.77)
	Private Institutions Quality		1117.4	-163.8	4263.6
			-0.56	(-0.06)	-0.93
	Trade in services		-61.59	-27.82	-0.506
		(-1.69)	(-0.80)	(-0.01)	
Ease of doing business		27.63	41.51	17.03	
		1.26	1.28	0.38	
Domestic Demand (X <sub>3</sub> )	Competition		1186.1	328.2	
			0.54	0.12	
	Quality of demand conditions		6880.5*	6531.2	
			2.24	1.97	
	Domestic market size		2673.6	2058.2	
			1.77	1.03	
	Business sophistication		-6587.8	-5800.8	
			(-1.34)	(-1.02)	
GDP per capita		0.0835	0.125		

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			0.85	1.07
	Inflation, consumer prices		63.12	-16.55
			0.38	(-0.11)
	Unemployment		-113.2	56.81
			(-0.71)	0.34
<hr/>				
	Health			881.5
				0.6
	Primary education			2686.9
				1.15
Government Conditions (X <sub>it</sub> )	Quantity of education			-508
				(-0.40)
	Public Institutions Quality			-4471.2
				(-1.48)
	Total tax rate			-65.61
				(-0.98)
	Time to prepare and pay taxes			7.648*
			2.05	
	Time required to enforce a contract			-0.504
				(-0.20)
<hr/>				
	Geographical Distance	0.195	0.0047	0.191
		1.07	0.03	0.91
				0.36
<hr/>				
	Constant	403.1	-10230.5	-22316.9
		0.2	(-1.30)	(-1.21)
				(-1.08)
<hr/>				
	<b>N</b>	96	90	79
	<b>Mean RSE</b>	7061.7	6756.1	7130.9
	<b>R-squared</b>	0.47	0.59	0.64
				0.68

t statistics in parentheses

\* p<0.05, \*\*p<0.01, \*\*\* p<0.001