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Assessing the Effects of Policies on China's Outward Foreign Direct Investment

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ASSESSING THE EFFECTS OF POLICIES ON CHINA'S OUTWARD FOREIGN DIRECT INVESTMENT

ABSTRACT

This paper discusses the determinants of China's outward foreign direct investment (OFDI) with a special focus on the role of government policy. In particular, we investigate the types of policies that are most influential in promoting OFDI. Our main contribution is to analyse, for the first time, China's OFDI policies by means of quantitative indicators. We refine policies definitions and distinguish between Regulation Policies, Service Policies, Promotion Policies and Supervision Policies, and we develop a methodology for collecting, screening and coding policies; then we create new indices to capture different types of policies. We find that Regulation Policies, Service Policies and the general attitude of the government have significant effects on China's OFDI at the national level.

KEYWORDS

Foreign Direct Investment Policy; China; Outward Foreign Direct Investment; Quantitative Analysis; Institutional Theory.

JEL classification: F23

1. INTRODUCTION

The motives and the operations of outwards foreign direct investment (OFDI) are well known especially in relation to those originating from advanced economies (Buckley & Casson, 1976; Buckley & Ghauri, 2004; Driffield & Love, 2007; Driffield, Love, & Menghinello, 2010; Dunning, 1981). This paper, however, draws on a more recent debate that looks at OFDI from emerging economies (Buckley et al., 2007; Child & Rodrigues, 2005; Mathews, 2006; Peng, Wang, & Jiang, 2008; UNCTAD, 2016). It has been argued that the internationalisation strategies of so-called emerging market multi-national enterprises (MNEs) might operate under different parameters (Blomkvist & Drogendijk, 2013; Drogendijk & Martín Martín, 2015; Liu, Buck, & Shu, 2005; Wei, Zheng, Liu, & Lu, 2014; Zhang & Daly, 2011).

OFDI from emerging economies have increased dramatically in recent years, and especially from China. Indeed, although China's OFDI activities started in the early 1980s, they have rapidly grown since, so much so that in 2016, China became the second largest source of FDIs in the world (Paul & Benito, 2018; UNCTAD, 2017). Buckley et al. (2007) identify three possible drivers of Chinese OFDIs: capital market imperfections in the home economy; the special ownership advantages of Chinese MNEs; and institutional factors. Liu et al. (2005) find that the rise of Chinese OFDI is the natural outcome of its economic growth in line with Dunning's Investment Development Path (IDP) Model (Dunning, 1981; Dunning, Kim, & Lin, 2001). More recently, Ramamurti and Hillemann (2018) suggest that one of the drivers of OFDI from emerging markets – and in particular from China – is a reliance on “government-created advantages”. The interventionist role of the Chinese Government in the economy is well documented (Yan, Zhu, Fan, & Kalfadellis, 2018) and this explains a recent stream of literature that has explored the *Chineseness* (Ramamurti & Hillemann, 2018) of the Government in managing firms' internationalization strategies, in which the government influences OFDI through state owned enterprises (SOEs) and by strengthening macroeconomic power, hence improving firms' bargaining power, providing a competitive platform and fostering national champions.

This paper is placed squarely within the institution-based view in International Business (North, 1990; Scott, 1995), as it explores to what extent government policies and attitude towards OFDI impact on OFDI trends in China, controlling for indicators of economic growth and openness. Drawing on the institution-based view (North, 1990; Scott, 1995), the paper expands the concept of government-created advantages introduced by Ramamurti and Hillemann (2018) by unpacking (empirically) in a fine-grained manner different types of micro-level policies that can constitute a government-created advantage that internationalising firms can benefit from. Notwithstanding this novel contribution, the paper also tests the IDP model hypothesis (Liu et al., 2005), allowing for a more holistic understanding of Chinese OFDI that integrates both economic and policy determinants.

The paper can be placed in the growing debate on the impact of policies on China's OFDI, which, as argued by Buckley et al. (2018), has to demonstrate what and how policies drive Chinese OFDI. The limited progress in this research area has been due to a lack of both data and explanatory measures to capture policies. This paper aims to fill this research gap by addressing the following questions: Can we distinguish between types of government interventions? Which types of policies can promote OFDI? To what extent do they promote OFDI? And, what are the mechanisms through which policies may affect OFDI?

This paper makes three main contributions to the current literature on Chinese OFDI. Firstly, notwithstanding our findings confirming the tenet of Dunning's IDP model (1981; 2001), we anchor our paper in institutional theories and extend the concept of government-created advantage (Ramamurti & Hillemann, 2018). Our paper provides further empirical evidence on the importance of institutions through their policies in developing the concept of government-created advantages, i.e. government should be distinguished from other institutions. In addition to the ownership control and macro-economic policies, we argue that government-created advantages can be built at the micro level by means of Supervision Policies and Service Policies. The paper's second novelty is to dissect these OFDI policies more comprehensively than ever before. We refine policies definitions and distinguish between Regulation Policies, Supervision Policies, Service Policies and Promotion Policies. Finally, drawing on Liu et al. (2005), we design a model that comprises economic variables as well as policy indices; here we model the role of government policies as a determinant of Chinese OFDI by means of

a new methodology that delivers a series of new and more reliable archival indices that capture Chinese government OFDI policies. Such policy indices cover continuously the period from 1981 to 2015, namely from the very first policies published in China on OFDI. The methodological and empirical contribution of the paper addresses a significant gap in the literature on Chinese OFDI.

The paper finds that releasing restrictions to investing abroad did encourage OFDI, whereas government-created advantages mainly came from Supervision Policies – which helped firms ease the problems of foreign liabilities – and Service Policies -which helped firms access more information and this positively impacted on OFDI. Finally, government’s attitudes were also important, as firms’ investments substantially required government’s approval. Our findings also confirm the validity of the IDP model, with GDP, education and IFDI able to explain OFDI (Liu et al., 2005).

This paper will proceed as follows. The next section presents theoretical background, followed by the presentation of the types of policies with the related hypotheses. Section 4 describes the data, model and the methodology of coding policies; followed by the discussion of the results and some concluding remarks.

2. THEORETICAL FRAMEWORK

The paper draws on institutional theory to explain the role of government policy in supporting OFDI in China. The institutional based view (IBV) in International Business has established itself as a theoretical framework that studies the role of institutions in businesses’ internationalisation strategies (Peng et al., 2008). Drawing on North (1990), institutions set the ‘rules of games’ for economic actors’ interactions. The IBV considers both formal and informal institutions, as well as varying geographical scales of institutional governance (North, 1991). Its theoretical contribution has been to overcome the dichotomy between market and state, and to accept the role of more complex institutional systems and powers in shaping and influencing MNEs’ internationalisation decisions (Meyer & Peng, 2016).

Some studies have focused on the role of institutions in host economies, stressing the conflicting objectives between MNEs and host governments (Stopford, Strange, Henley, & Henley, 1991) or the bargaining games MNEs would engage in across competing host governments. Other contributions have looked at the regulatory framework, informal customs and attitudes, as well as

policy interventions by home governments. MNEs from emerging markets have been found often to operate within a home institutional framework either characterised by instability, uncertainty or inadequacy (Lazzarini, Mesquita, Monteiro, & Musacchio, 2020) leading to a possible institutional void (Khanna & Palepu, 1997). However, the dramatic increase of OFDI especially from Asia, and from China in particular, has drawn the attention of scholars to the strategic and interventionist role of home governments. This strand of research expanded institutional theory in a way that accounts for how formal institutions (Scott, 1995) can promote OFDI and help firms acquire home-country-based advantages (Cui & Jiang, 2010).

Drawing on the IBV, this paper analyses the role of government in the case of China, arguing that a home government with a formal institutional framework with clear, visible and direct policies and regulations can direct and shape MNEs' internationalisation decisions.

It is well accepted that the Chinese government's influence on OFDI has occurred via ownership and regulation (Child & Rodrigues, 2005). In the initial phases of OFDI, evidence suggests that OFDI was primarily undertaken by SOEs which were pushed to take the first steps abroad and pave the way for other private firms to follow (Wang, Hong, Kafouros, & Wright, 2012). However, the share of SOEs' OFDI has been decreasing dramatically, especially in recent years (MOC, NBS, & SAFE, 2017). In parallel, but increasingly so, scholars believe that the Chinese government has been playing an important role in steering, shaping and promoting OFDI, especially since the early 1980s (Buckley et al., 2007; Buckley et al., 2018; Gu & Han, 2011; Sauvart & Chen, 2014; Yeung & Liu, 2008). Studies on formal institutions, such as the role of policies are prevalent (Lu, Liu, & Wang, 2011; Luo, Xue, & Han, 2010; Wang, Hong, Kafouros, & Wright, 2012), and focus on the regulatory environment, including policy instruments and recommendations. The government is able to control OFDI via economic liberalization policies aimed to promote OFDI (Buckley et al., 2007). However, although China has been removing restrictions on investing in other countries, scholars believe that the process remains complicated (Sauvant & Chen, 2014). Besides, the government has also improved the investment environment (Li, Cui, & Lu, 2014) and created the right incentives to encourage firms to invest abroad (Lu et al., 2011; Wang, Hong, Kafouros, & Boateng, 2012), and by so doing, Chinese firms have been able to acquire unique ownership advantages that might have compensated for their

lack of international experience. Overall the government's attitude towards OFDI can affect firms' decision by reiterating an implicit support to internationalisation via informal and formal communications, especially in a cultural context characterised by isomorphic pressures (Cui & Jiang, 2012; Ramamurti & Hillemann, 2018). In other words, how institutions might impose constraints or offer incentives influences economic actors' choices (North, 1993) with instruments and interventions that can amount to government-created advantages that enable firms to embark on an internationalisation strategy and thrive internationally (Ramamurti & Hillemann, 2018).

Most of the existing literature tends to focus on strategic policies such as Open Door policy and Go Global policy (Buckley et al., 2007; Shen & Mantzopoulos, 2013; Voss, Buckley, & Cross, 2008); however, China has put in place a comprehensive policy framework and the government can indeed deploy a *set* of policies to achieve, in this case, the objective of encouraging and stirring OFDI. Such policies can target the regulatory framework of foreign investments, or the support that domestic firms receive in their internationalization process. It is often believed that de-regulation policies promote OFDI (Buckley et al., 2007) as regulation policies impose constrains. Despite significant progress, the current OFDI regulatory framework in China is still believed to be too complex (Sauvant & Chen, 2014). The impact of regulatory policies on OFDI depends to a great extent on the nature of these policies. As we will argue later, OFDI falls within the responsibility of many government departments to ensure that Chinese MNEs are actually anchored on a sustainable growth path, namely, suggesting that OFDI is perceived to be one of the instruments to pursue the overarching aim of economic growth. For example, in 1996, the Ministry of Finance (MOF) published a document titled *Interim Measures for Financial Management of Overseas Investment*, and in its first sentence, it spelt out that one of the goals of any regulative policy was to benefit firms as much as support OFDI. In this case, this type of regulative policies should have positive impact on OFDI rather than just hindering OFDI by imposing constrains. Similarly, promotion policies are generally believed to give advantages to firms (Cui & Jiang, 2010); however, these tend to be very strict and to target specific firms or specific sectors, therefore, casting doubts on whether they can fully explain the surge of China's OFDI. Therefore, it is very important to adopt refined categorisation and detailed definitions of these policies when assessing their implications, and this is what we intend to do in this paper.

To the best of our knowledge, only few studies have considered China's OFDI specific policies. Davies (2013); Freeman (2013); Luo et al. (2010); Sauvart and Chen (2014); Voss et al. (2008) are the only papers that study or partially study China's OFDI specific policies. However, these papers predominately adopt a descriptive approach. Other than that, scholars tried to analyse the role of the government by studying the characteristics of SOEs (Cui & Jiang, 2012; Wang, Hong, Kafouros, & Wright, 2012). Scholars have also tried to use survey data where firms are asked to report their perceptions of the institutional framework (Cui & Jiang, 2012). The main problem with this line of research is the lack of objectivity of the data and comparability with other studies (Cui & Jiang, 2012). Very few studies adopt an empirical approach and these studies tend to rely on time dummy variables to represent strategic policies (Buckley et al., 2007; Gao, Liu, & Zou, 2013), while ignoring the more specific policies. Given that the process of introducing and implementing strategic policies normally lasts several years, time dummies fail to capture the dynamic effect of these policies.

So this paper aims to fill a gap in the existing literature, by dissecting OFDI policies more comprehensively than ever before. We refine the definitions of firm-targeted policies and distinguish between Regulation Policies, Supervision Policies, Service Policies and Promotion Policies. Regulation policies reflect the government approval and regulatory processes; Supervision Policies capture the regulatory process of the overseas operations of MNEs; Service Policies represent the support provided by the government to Chinese multinationals through sharing information and communication platforms; and, finally, Promotion Policies refers the financial support and privilege provided by the government to certain Chinese firms. The above breakdown of policies sheds some light on which type of firm-targeted policies would shape government-created advantages (Ramamurti and Hillemann (2018).

3. CHINA'S POLICY FRAMEWORK

To better understand the gaps of the current literature on the effects of China's OFDI policies and the contribution of our work, we firstly introduce the OFDI related institutional framework and policy framework.

3.1. *Institutional Map*

According to China's Constitution, the State Council (SC) is the highest body of the state administration. It comprises the General Office, 26 ministries, one *ad hoc* organisation (the State-owned Assets Supervision and Administration Commission (SASAC)), 16 departments, two offices, nine public institutions, and 16 state bureaus. OFDI is regulated by multiple institutions by means of specific policies. The current institutional framework designated to intervene on China's OFDI is shown in Figure 1. Key institutions with responsibilities in designing and implementing different types of instruments and decisions in relation to OFDI include the SC, National Development and Reform Commission (NDRC), Ministry of Commerce (MOC), and State Administration of Foreign Exchange (SAFE).

Figure 1 goes about here

3.2. *The policy framework*

We distinguish the following types of OFDI policies: Regulatory Policy (Regulation Policies, Supervision Policies), and Supportive policies (Service Policies and Promotion Policies).

Regulatory Policy

The first type of regulatory policies is **Regulation Policies** (e.g. approval/recording), which describe government's approval process and regulate the process by specifying who and how; such policies have changed from overseeing an examination-approval process to just a recording system. Regulation Policies are published by SC, NDRC, MOC and SAFE. NDRC, MOC and SAFE are ministries and departments of SC and accountable to SC¹. SC oversees all aspect of the regulation process of OFDI: in particular, NDRC is responsible for examining the recommendation and the feasibility study reports, MOC is responsible for examining the contracts and SAFE is responsible for

¹ Although the names of these departments changed several times since 1980s, we record them under their current name.

examining the security and sources of the foreign exchange. Firms cannot engage in OFDI without proceeding along all of these three steps.

China's OFDI Regulation Policies have been changed dramatically since the kicking off of OFDI from China. OFDI was under strict restrictions in the early stages mainly to prevent capital outflows (Blomkvist & Drogendijk, 2013), when OFDI was regarded as "Poisonous Grass" (Luo et al., 2010). Regulation Policies were also used to protect state assets and to make sure that OFDI was consistent with the country's interests (Buckley et al., 2007; Cui & Jiang, 2012; Luo et al., 2010). Regulation policies were gradually released in the last three decades, but remain relatively restrictive in comparison to advanced economies (Blomkvist & Drogendijk, 2013; Buckley et al., 2007). For instance, in 2003, the MOC and SAFE jointly published a *Circular on Issues Concerning the Procedures for Examination and Approval and the Power to Decentralize the Procedures for Overseas Processing Trade Projects*, which relaxed restrictions and simplified the MOC's and SAFE's approval process.

The regulatory environment in the home country is one of the most important factors that affect firms' decisions (Cui & Jiang, 2012). Regulation policies are perceived as restrictions by firms, for instance blocking firms in certain sectors from investing abroad. For example, in 2004, MOC published *Provisions on approval issues for overseas investment and founding enterprises*, which listed seven categories of OFDI that would not have been approved. One of these categories related to OFDI that involved technology and goods that could not have been exported². Moreover, the institutional environment reflected in Regulation Policies affecting firms' transaction costs (Meyer, 2001; North, 1990). More regulation would lead to more lengthy application documents. Firms may also be at a disadvantage when operating internationally because they may face certain home restrictions such as delays and limitations to moving additional capital abroad. Firms may also be required to transfer their profit back to their parent companies, which would hinder their international

² According to *Catalogue of Technologies prohibited and Restricted from Export* published by MOC in 2001, there are 45 categories technologies that are prohibited to export.

expansion. Therefore, firms face a high degree of risk and uncertainty that may discourage OFDI, and those firms that decide to invest abroad face high transaction costs that may reduce their efficiency.

Moreover, in a more restrictive institutional environment, firms may also face higher isomorphic pressure, which restrict them from adopting strategies according to their own interests and lead them instead to follow others' practices when selecting locations (Cui & Jiang, 2012; Meyer & Rowan, 1977).

As mentioned earlier, China has been gradually relaxing its regulation in view of allowing more economic freedom, improving transparency and reducing transaction costs, which all are features of a good institutional environment (Cole, Elliott, & Zhang, 2009). Although China's OFDI Regulation Policies have changed year on year, the pace of this change remains slow and gradual (Estrin & Prevezer, 2011). The direction of the change is nevertheless predictable as OFDI approval rules have become more transparent. Therefore, firms face less uncertainty and risk which is expected to improve their efficiency and enhance their OFDI (Wong & Chan, 2003).

A deregulation in OFDI policies has allowed firms to operate according to their own interests (Doh, Rodrigues, Saka-Helmhout, & Makhija, 2017) driven by efficiency and overall competitiveness (Cuervo-Cazurra, Gaur, & Singh, 2019). Deregulation has also resulted in a higher level of competition in the domestic market forcing firms to improve their efficiency and build their ownership advantages. Therefore, we expect that

Hypothesis 1a: The easing of Regulation Policies has a positive effect on the volume of OFDI at the national level.

The second type of regulatory policies is **Supervision Policies**. Supervision Policies are used to monitor the operations of multinational firms. They require firms to regularly submit financial reports, to provide data to the government for the purpose of collecting statistics, to improve credibility by regularly publishing credit reports, to operate safely and so on. For example, the MOC published *Circular on Issuing the Guidelines for Safety Management* in 2012, which urge firms to pay more attention to safety issues.

The effects of Supervision Policies on OFDI seem ambiguous from a theoretical point of view. On the one hand, similarly to Regulation Policies, Supervision Policies put restrictions on firms' behaviour and impose transaction costs (Meyer, 2001; North, 1990). The overall tendency of Regulation Policies has been to ease restrictions, while the newly issued Supervision Policies are increasing restrictions on firms. As a result, firms have to allocate additional resources to meet these supervision requirements, facing higher transaction costs.

However, these restrictions are deemed to be essential to help firms remain on a sustainable growth path. For example, Supervision Policies that introduced financial and safety inspections, allowed firms to overcome some of the negative effects of the liability of origin that was associated with weaknesses in Chinese institutions (Marano, Tashman, & Kostova, 2017; Pant & Ramachandran, 2012). Supervision Policies urge firms to take more responsibilities, increase corporate social responsibility performance, improve their image in host countries and reduce unfavourable perceptions. This should allow firms to build better relationships with stakeholders such as customers, employees, and partners (Tashman, Marano, & Kostova, 2019) and better interactions with the local governments in host countries (Buckley, Doh, & Benischke, 2017). This endows Chinese firms with a government-created advantage, hence compensating for the disadvantage of the liability of origin when firms invest in other countries. Moreover, as a result, firms should be able to improve their performance (Henisz, Dorobantu, & Nartey, 2014), meet sustainability objectives and have lower risks (Bansal & Roth, 2000). This creates stronger incentives, which are important for firms from emerging countries including China, and should, therefore, encourage firms to invest abroad (Lu et al., 2011; Wang, Hong, Kafouros, & Boateng, 2012). Chinese firms' internationalisation is still at an early stage in comparison with firms from advanced countries (Ramamurti & Hillemann, 2018), which makes it still so important for the government to have a paternalistic attitude.

We believe that the overall positive effect of Supervision Policies would outweigh any negative effects associated with increased compliance costs. The requirements that are associated with Supervision Policies, such as submitting a financial report and providing data for statistical purposes, are less restrictive in comparison with Regulation Policies. Moreover, Supervision Policies are intended to supervise the behaviour of firms subsequent to an OFDI strategy. Therefore, we assume

that Supervision Policies, rather than having a discouraging effect on OFDI, are perceived to compensate for some of the disadvantages faced by Chinese firms in foreign countries. As a result of these policies, we would expect firms to have a greater incentive to set-up businesses and engage in mergers and acquisitions internationally. Hence, our second hypothesis is that:

Hypothesis 1b: Supervision Policies have a positive effect on the volume of OFDI at the national level.

Supportive Policies

The Chinese government has been playing a more pro-active role in supporting OFDI through supportive policies, which have been published at a more frequent pace since the 2000s, signalling a shift in the role of the Chinese government from an administrator to a sponsor (Child & Rodrigues, 2005). Supportive policies are believed to be vital in emerging countries such as China, as they aim to compensate for the disadvantages that firms encounter when investing abroad (Luo et al., 2010). In the context of China, existing studies show that supportive policies are a significant driver of OFDI at the national level (Carlos Zalaf Caseiro & Masiero, 2014; Deng, 2013; Gaur, Ma, & Ding, 2018; Lu et al., 2011; Luo et al., 2010). We would argue that by the nature of their objectives and related interventions, Supportive Policies are exemplary of the intentional government-created advantage that a pro-OFDI government can build to help business along the internationalisation process (Ramamurti & Hillemann, 2018). However, it is not clear *how* supportive policies influence China's OFDI.

Within the set of supportive policies, we distinguish between **Service Policies** and **Promotion Policies**. Service Policies are published by the government to support Chinese firms' investments and operations in other countries by sharing information and providing communication platforms. According to Wang, Hong, Kafourous, and Wright (2012), governments, especially in developing countries, play an important role in sharing information and communication. For example, MOC published the *Country Trade Investment Environment Report* in 2003, which provides information on host countries. Promotion Policies are published by the government to promote OFDI by providing financial support or giving specific privileges to investing firms. Similarly, in 2003, the NDRC and the

China Import and Export Bank published *Circular on Issues Concerning Granting Credit Support to Key Projects Encouraged by the State for Overseas Investment*.

The lack of information on foreign institutional environments and laws could be a major obstacle for the internationalisation of firms who lack an international business experience. Therefore, we expect Service Policies to help firms invest in other countries; for instance, by providing firms with information on the resource endowments in foreign countries and about the foreign investment environment in specific locations. Service Policies will also help firms acquire a better understanding of the institutional environment in host countries and will support firms OFDI operation by providing advice on how to operate in a foreign market or again on how to build their communication platforms e.g. websites. We do not expect these policies to have an immediate effect on firms' choices but rather that the provisions included would seep slowly through the system. We would argue that Service Policies tend to have accumulated effects and we expect them to affect firms' decision-making over time. Therefore, two conditions should be met for these policies to have an effect: 1) their impact on OFDI is lagged; and 2) the information in the policies should not be out of date during this period.

Whilst Service Policies aim to compensate for firms' disadvantages, Promotion Policies aim to grant them specific advantages especially financial advantages, by providing credit funds to support OFDI project, granting discounted bank loans to firms investing abroad, and giving preferential credit to targeted projects (Liu, Wang, & Wei, 2009; Luo et al., 2010). This government-created advantages give firms specific incentives to invest abroad. Therefore, we expect that

Hypothesis 2a: Service Policies have a positive effect on the volume of China's OFDI at the national level.

Hypothesis 2b: Promotion Policies have a positive effect on the volume of China's OFDI at the national level.

Government Attitude

The attitude of the Chinese Government has been increasingly in favour of OFDI, as discussed above in the policy decisions taken, albeit being able to directly control the volume and the trends of

OFDI. Since the beginning of the 21st century, when China joined the WTO, the overall number of OFDI related policies have significantly increased. Although the approval system has become more of a recording system, every investment is still monitored by the government. The recording system requires firms to report the required information online, and although firms do not need government approval to invest abroad, they still need certificates from NDRC and MOC to record the OFDI and proceed with it. Overall the publishing of OFDI related policies contributes to create a cognitive environment, which is defined by the shared perceptions (Scott, 1995). The cognitive environment would capture the attitude of the government, the extent of support available from the government and the stringency of the approval process.

A greater number of OFDI policies indicates an increasingly positive attitude of the central government towards OFDI. Therefore, we expect that

Hypothesis 3: China's overall number of OFDI policies has a positive effect on the volume of OFDI at national level.

4. METHODOLOGY, DATA AND MODEL SPECIFICATION

4.1. A New Methodology to Create OFDI Policies Indices

In order to quantify the impact of policy on the trends of OFDI, we developed a rigorous methodology that has enabled us to create new indices that capture relevant policies. Our methodology proceeded along three steps: 1) the collecting, 2) screening and 3) coding of policies.

Since China's OFDI started in 1981, we collected all the national level policies published by the Central Government from 1981 to 2015; such policies were expected to affect the volume of OFDI directly. We relied on two sources to access such policies: the first and the main source was the official website of the Chinese government. China's OFDI was mainly regulated by the SC together with NDRC, MOC and SAFE; each government department would have its own website. However, since Chinese OFDI policies were mainly supervised by MOC and SC, all policies that were found to be published by other ministerial departments were also repeated on MOC and SC websites, so the

latter became key government sources.³ The second source of information was the existing academic literature, in particular Luo et al. (2010) and Voss et al. (2008) to make sure that no policy was omitted.⁴ In the end we collected 526 OFDI relevant policies as summarized in Table 1. To the best of our knowledge, there is no archival index to measure China’s OFDI policy. The continuous evolution of China’s OFDI policies in the last three decades provides a unique opportunity to capture this dynamic change.

Table 1 goes about here

The second step was to screen and remove noise policies and indirect policies. Noise policies were screened out because only tangentially mentioning OFDI; these were 366 policies (see details in Table 2). We also decided to screen out indirect policies (78) since their main target was for instance export, state-owned assets, etc rather than OFDI; these policies were also limited in effect because usually very general.⁵ We were left with 82 OFDI direct policies that were aimed at regulating or promoting OFDI, and the content of each policy was directly and entirely related to OFDI.

Therefore, in this paper, we focus on these specific direct policies that were intended to actually affect China’s OFDI at the national level. The hierarchy of China's direct OFDI-related policies can be visualised in Figure 2.

Table 2 goes about here

Figure 2 goes about here

³ It is worth mentioning that the Chinese terms for OFDI are Overseas Investment (境外投资) and Outward Investment (对外投资); we used both as keywords in our search.

⁴ Literature also includes: Davies (2013); Freeman (2013); Luo et al. (2010); Sauvant and Chen (2014); Voss et al. (2008); Yang and Clyde (2014); Yao and Li (2011); Zhou (2009)

⁵ See Appendix B for an example of an indirect policy.

Finally, we coded the 82 relevant direct OFDI policies to be able to introduce them in our empirical model. Based on the literature and our understanding of policies, we divided the policies into four types identified above in the paper: i.e. Regulation (approval/recording) Policies, Supervision Policies, Service Policies and Promotion Policies (see Table 3). We assigned each policy a weight and a sign as a score, and cumulated policy scores to get year scores and cumulative year scores⁶ (See Appendix C for time trends of such policies between 1982 and 2015). We applied the formula below:

$$PolicyIndex_{kt} = \sum_{i=0}^a YearScore_{k,t-i} \quad (1)$$

$$YearScore_{kt} = \sum PolicyScore_{ktj} \quad (2)$$

$$PolicyScore_{ktj} = \pm Weight * Policy_{ktj} \quad (3)$$

where $Policy_{ktj}$ stands for policy j of type k published in year t . $PolicyScore_{ktj}$ is the weighted score of policy j of type k published in year t . $YearScore_{kt}$ is the accumulated score of every policy of type k published in year t . $PolicyIndex_{kt}$ is the policy index of type k in year t which represented the accumulated year scores in the past $a+1$ years. We adjusted the coding methods to different types of policies according to their mode of operation.

We identified 31 Regulation Policies. Since the Regulation Policies published by the three departments were equally important, they were equally weighted: each policy published by either of these three departments had a score of one; policies jointly published by more than one department had a score of the number of publishing departments; policies published by SC had a score of three, being the overseeing department.

Based on the content of each policy, a positive sign was assigned if the policy was relaxing a restriction, and a negative sign if the policy was strengthening the restriction. This resulted in an

⁶ The policies published at the end of a year were less likely to have any effect on the volume of OFDI of the current year. Therefore, we counted the policies published in the second half of a year as the next year's policies. For example, if a policy was published in the first six months of 2014, we regarded this policy as one of the policies of 2014. If a policy was published in the last six months of 2014, we regarded this policy as a policy of 2015.

annual index that captures change in Regulation Policies and the easing of the approving process. More specifically, the higher the index, and the greater the number of restrictions that had been relaxed, making OFDI easier for firms.

For example, in 2003, the MOC and SAFE jointly published *Circular on Issues Concerning the Procedures for Examination and Approval and the Power to Decentralize the Procedures for Overseas Processing Trade Projects*, which simplified the MOC's and SAFE's approval process. There were two publishing departments and the policy was relaxing a restriction. Therefore, this policy has a score of two.

We then cumulated scores for every policy every year and calculated annual policy scores and the cumulated annual policy scores for the five years following policies' publication into a yearly policy index. Indeed, each policy had a start date, but not an explicit expiry date, as it would be replaced by a new policy after some years. Moreover, the impact of the policies in relaxing regulations would phase out after few years. Therefore, we would examine the impact of the policies in the first five years, which is also the length of a Five-Year Plan.

Different from the Regulation Policies, whose influence on OFDI increased the more government departments publish it, because each department covered different responsibilities, and together they imposed multiple restrictions on different aspects on, each Supervision Policies was equally important, as each of the Supervision Policies only regulate one aspect. Therefore, each policy was given a weight of one. We identify 18 Supervision Policies in total. We cumulated these policies over a five year's period to represent the Supervision Policies index. A larger Supervision Policies index implies a more complex supervision system but also increase the creditability of firms, hence benefit firms and encourage them to invest in other countries.

There are 14 Service Policies in total. Service policies might be published by more than one department, suggesting that their implementation requires the cooperation of multiple departments, but this should not indicate that the relevance of a policy requires multiple weighting. Therefore, all policies have a positive sign and are equally weighted with a weight of one. We used the cumulated scores of Service Policies over the past five years to represent the power of Service Policies over time. We also constructed the index by accumulating scores over a period of three years to compare the

effect of Service Policies over different time periods. The higher the index, the greater the number of Service Policies.

We identify 19 Promotion Policies in total. In a similar way to Service Policies, multiple publishing departments should just mean that the implementation of Promotion Policies needs cooperation of several departments, and not mean that these policies are more important. Therefore, each policy is weighted as positive one. We used the cumulated scores of Promotion Policies over the past five years to represent the power of Promotion Policies over time.

Table 3 goes about here

Finally, we calculated the total number of OFDI direct policies as a way to capture the attitude of the government towards OFDI. As the government reduced restrictions and/or promoted firms to invest abroad, it published policies to this end to influence firms' attitudes and choices. So we construct the overall Government Attitude (GA) index by accumulating the number of OFDI policies and apply a 1, 3 and 5 year time windows. Moreover, we use exploratory factor analysis to extract a common factor, which captures the 99.30% variance of the four indices above⁷.

4.2. Model

The model we built is based on the work of Liu et al. (2005) and Dunning's IDP theory (1981; 2001) as shown below:

$$I_t = \alpha + GDPPC_t + IFDI_t + EX_t + EDU_t + \varepsilon_t \quad (4)$$

where I_t is China's OFDI at time t . $GDPPC_t$ is Gross Domestic Product per capita at time t ; $IFDI_t$ is Inward FDI at time t ; EX_t is the total volume of exports at time t ; EDU_t is education at time t and ε_t an error term. We used the number of postgraduates each year to represent education as high education is an important indicator of human capital (Gao et al., 2013; Rui & Yip, 2008). The education variable

⁷ Details of the factor analysis are presented in Appendix D.

was scaled by the size of the population in any given year. Both OFDI and IFDI are stocks rather than flows because flows cannot reflect investment earnings (Bellak, 2001). Dunning’s (1981) IDP theory indicated that OFDI is positively related to IFDI. The reinvestment of capital brought by IFDI and potential spillover effects from IFDI are expected to promote OFDI. From a theoretical point of view, the relationship between OFDI and exports is ambiguous. A larger volume of exports may help firms accumulate international business experience, strengthen their advantages (Dunning, 1980; Dunning et al., 2001) and encourage firms to engage in OFDI (Yao, Wang, Zhang, & Ou, 2016). However, OFDI could replace exports (Gao et al., 2013). Access to highly educated labour both offers Chinese firms a competitive advantages (Liu et al., 2005), and attracts more IFDI, which in turns further promotes OFDI. In our model, we treat GDP per capita, IFDI, export and education as control variables.

All monetary variables were deflated using a GDP deflator (base year 2010) extracted from the World Bank Indicators (2017). The data on, GDP per capita, education and exports volume are extracted from the China’s statistic yearbook (1981-2015). Our data covers the time period between 1981 and 2015. OFDI and IFDI stock variables are extracted from UNCTADSTAT⁸. We have logged and first differentiated all economic variables and introduced our policy variables. Therefore, we estimate the following model:

$$\Delta \text{Log } I_t = \alpha + \Delta \text{Log } \text{GDPPC}_t + \Delta \text{Log } \text{IFDI}_t + \Delta \text{Log } \text{EX}_t + \Delta \text{Log } \text{EDU}_t + \text{PolicyIndex}_{kt} + \varepsilon_t \quad (5)$$

Table 4 provides summary statistics of all variables.

Table 4 goes about here

⁸ Data can be accessed via the link:
https://unctadstat.unctad.org/wds/ReportFolders/reportFolders.aspx?sCS_ChosenLang=en.

4.3. *Endogeneity concerns*

Our model of OFDI may face certain endogeneity issues, which is the situation when independent variables and the error term are correlated, that would lead to inconsistent results when applying Ordinary Least Square (OLS) (Greene, 2018). These issues could be the results of omitted variables, measurement errors or simultaneous causality among dependent and independent variables

Our model specification is based on the IDP theory (Dunning, 1981) and its applications to the case of China (Gao et al., 2013; Liu et al., 2005; Yao et al., 2016). As such, our model includes the set of control variables usually adopted in the literature as determinants of OFDI. Therefore, omitted variables should not be a concern. Moreover, we rely on official data sources, such as the World Bank, China Statistic Yearbook and the UNCTAD, for all of our variables. Therefore, measurement errors also should not be a concern.

Endogeneity could result from simultaneous causality, in particular in terms of OFDI and GDP per capita and OFDI and exports. Firms, especially from emerging countries, use OFDI as a springboard to acquire valuable strategic assets such as advanced technology (Luo & Tung, 2007), bring these assets to the parent companies and apply them in the domestic market. As a result, GDP per capita of home countries may increase via reverse spillover effects (Driffield & Love, 2003). However, in the case of China, asset seeking OFDI is noticeable but not a dominant type. Moreover, during the period of our analysis, some of the Chinese multinationals were very successful and large prior to their internationalisation through FDI like, for example, ZTE, Haier and Ocean Shipping Co. (Luo & Tung, 2007). We, therefore, believe that the endogeneity between OFDI and GDP per capita should be limited in the case of our data.

In terms of exports and OFDI, market seeking OFDI would help firms get behind trade barriers and replace exports. However, according to the official data from the SBOCOFDI, OFDI in the manufacturing sector represented only 4% of total OFDI in 2006 and 7.78% in 2014. The majority of OFDI was concentrated in resource seeking, leasing and business services, and banking, while exports were predominately concentrated in the manufacturing sector (93.75% in 2016 according to the World Bank). Hence, endogeneity concerns related to the exports variable should be limited.

Nevertheless, we apply different techniques to deal with potential endogeneity issues. Firstly, we used one-year-lagged variables as independent variables, as the OFDI in a certain year is unlikely to influence GDP per capita or exports in previous years. This method has been widely used in the field of international business (Chen, Zhan, Tong, & Kumar, 2020; Deng & Yang, 2015; Li, Guo, & Xu, 2017; Lu, Liu, Filatotchev, & Wright, 2014; Wang, Hong, Kafouros, & Boateng, 2012; Wang, Hong, Kafouros, & Wright, 2012). Secondly, we estimate a two Stage Least Square (2SLS) with instrument variables.

As instrument for the export variable, we use the size of the population in China. Unlike goods and services markets that are internationally well integrated, the international movement of labour remains relatively restricted leading to differential labour market outcomes (Buckley, 2009). The relatively cheap and well educated labour force endowed China with a significant comparative advantage in terms of manufacturing goods. Moreover, the size of the population in China is determined by the One-Child Policy, also known as family planning policy. China adopted the One-Child Policy between 1979 and 2015, and this policy was very effective (Zhao & Guo, 2007). According to the former department of State Family Planning Commission, planned births represented 94.6% of overall births in 2002 (Zhao & Guo, 2007). Therefore, the size of population is an exogenous variable.

As instrument for the GDP per capita, we use the GDP per capita in the primary industry. The GDP in the primary industry represented between 10% to 30% of the total GDP in the time range of our data (NBS, 2016). Meanwhile, OFDI in this sector only accounted for 1.65% of the total volume of OFDI in 2014 and in earlier years it accounted for less than 1% (MOC et al., 2017). We also use the lagged values of GDP per capita and exports as additional instruments in the 2SLS specification.

5. RESULTS

5.1. Unit Root Tests

Table 5 presents the results of the Phillips-Perron unit-root test (Phillips & Perron, 1988) to verify if the variables are stationary. If the variables in the model are not stationary, the regression could be spurious and the t test and F test would not be reliable (Engle & Granger, 1987).

As can be seen in Table 5, not all variables are stationary. $\Delta\text{Log OFDI}$, $\Delta\text{Log Export}$, $\Delta\text{Log Education}$ and the overall Government Attitude index are stationary and therefore, are integrated at $I(0)$. $\Delta\text{Log IFDI}$, Regulation Policies index, Supervision Policies index, Service Policies index, Promotion Policies index and the policy common factor are not stationary however the first difference of each of these variables is stationary, which indicates that these variables are integrated at $I(1)$. We also found that the null hypothesis was only marginally rejected by $z(\rho)$ and cannot be rejected by $z(t)$ when we tested whether there is any unit root in $\Delta\text{Log GDPPC}$. However, the Phillips-Perron test tends to have more power to reject the null hypothesis (Schwert, 2002), especially when the sampling frequency is low (Choi & Chung, 1995). Therefore, we use the DF-GLS test to test the unit root. The test statistic is -2.342 while the 5% critical value is -3.195, indicating that there is a unit root in the growth rate of GDP per capita. Therefore, we can consider the growth rate of GDP per capita as $I(1)$.

Table 5 goes about here

5.2. *Cointegration Test*

Given the results presented in Table 5, introducing the variables directly in the model may lead to spurious problems. To use these variables in the model, we could continue to difference them until all are stationary (Wooldridge, 2009), however the variables that had been differenced too many times would become meaningless. However, if the variables were co-integrated, the model will be super-consistent rather than spurious (Engle & Granger, 1987). As can be seen in Table 5, there were at least two variables in each model that were integrated at $I(1)$, which meet the pre-condition that the model may be co-integrated (Johansen, 1995).

We adopt the Johansen's approach (Johansen, 1988; Johansen & Juselius, 1990) that is widely used in the literature (Cui, Meyer, & Hu, 2014; Liu et al., 2005) to verify the existence of any co movement, i.e. co integration, among our variables. The results are presented in Table 6.⁹

⁹ The models in Table 6 correspond to the models in the results Table 7.

Table 6 goes about here

The null hypothesis of Johansen's test is that there are at most a certain number of co-integration vectors in each model. The numbers to be tested in each model are shown in the first column. The test results show that there is at least one co-integration vector in each model. Therefore, each model is co-integrated and is super-consistent rather than spurious. Given the co-movement between variables in each of the specifications, we can apply OLS methodology to estimate these.

5.3. *The Impact of Policy on China's OFDI: Main Specification.*

Table 7 goes about here

Table 7 presents the results from our main specifications. As can be seen in Table 7, Models 2 and 3, Regulation Policies are positively related to the stocks of China's OFDI. In other words, as the government released regulatory restrictions, the stocks of OFDI increased, which is consistent with our **Hypothesis 1a**. While the coefficient on the Regulation Policies index is only significant at the 10% level in Model 2, the same coefficient is significant at the 5% level when we introduce a one year lag of the Regulation Policies variable (Model 3). This suggests that when policies changed, the impact on firms' decisions is delayed. This could be explained by the fact that both firms and governments (the central government and local governments) need time to learn and implement the new processes. Changes in the Regulation Policies involve a release in the local governments' scrutiny over investment decisions: for instance a change of regulation might allow local governments to acquire additional examination powers from the central government¹⁰ or to have their existing powers

¹⁰ For example, in 2004, MOC published *Provisions on the approval of overseas investment enterprises* (关于境外投资开办企业核准事项的规定), which delegate part of the examination power to local MOC.

extended.¹¹ The implementation of these changes requires a learning process: local governments need time to acquire the relevant experience to implement the new procedures, and, our findings suggest that firms also need time to understand and incorporate the new provisions in their decisions making process.

We find that the coefficient for Supervision Policies (Model 4) is only significant at the 10% level; however, it is still positive, which is consistent with **Hypothesis 1b**. This result indicates that, on balance, Supervision Policies are supportive of OFDI and help firms tackle the problems associated with the liability of foreignness and to build a more positive image abroad. Supervisions Policies are a means for the government to steer and encourage firms to adopt measures that would improve their competitiveness. This finding also suggests that Chinese firms may have underestimated the difficulties of investing abroad and the importance of a positive image in host countries.

Models 5 and 6 in Table 7 show that Service Policies promote OFDI which is consistent with **Hypothesis 2a**. Governments in emerging economies promote OFDI by providing information to compensate for firms' lack of international experience. We coded Service Policies with a 3 and 5 years time span. The Service Policies coefficient is positive and significant in both cases. This indicates that the information provided by the government remain effective in at least a five years period.

However, our findings suggest that Promotion Policies have no significant relationships with the stock of China's OFDI at the national level (Model 7 in Table 7). This finding contradicts **Hypothesis 2b**. A possible explanation is that Promotion Policies tend to target specific groups of firms and that the effect of these policies does not necessarily translate at the national level. Although promotional policies are a powerful policy instrument, they are only applied to certain firms or to certain sectors in which firms' OFDI can meet national objectives (Buckley, Cross, Tan, Xin, & Voss, 2008), such as promoting export. For instance, in 1999, PBC and MOC published *Notice on Issuing the Guidance Opinions on credit for supporting the overseas material processing and assembling*

¹¹ For example, in 2011, NDRC published *Notice on the work of the approval authority to do a good job in the delegated approval of overseas investment projects* (关于做好境外投资项目下放核准权限工作的通知), which increase the threshold of resource development project that can be approved by local NDRC from 30 million to 300 million.

business. This notice primarily targeted the manufacturing sector which represented a large share of total export from China (92.38% in 2014 and 93.75% in 2016). However, OFDI in the manufacturing sector represented only 4% of total OFDI in 2006 and 7.78% in 2014 (MOC et al., 2017). Hence, Promotion Policies seem to have a limited impact on the total volume of OFDI at the national level.

Finally, we test the impact of the government's general attitude (GA) to promoting OFDI on the stock of OFDI at the national level. We use the total number of direct policies each year and a common factor (F1) extracted from the four policies index types to measure the government attitude. We apply various lag structures of the GA variable (1, 3 and 5 years). Results presented in Models 8-11 in Table 7 indicate that the general attitude of the government has a positive and significant effect on the stock of OFDI, however this attitude requires a time delay to become effective. The attitude of the government is reflected by the number of policies and is observed by firms. Firms interested in investing abroad might be encouraged by the pro-OFDI policies, however the process of investing abroad requires significant time; for scouting for information, deciding on the best host location, preparing the necessary documents for the approval process and for the acquisition of the certificate of approval for the overseas investment project. The GA Index is significant with a 1 year lag and over a 3 years interval, suggesting that the attitude of the government has an impact on OFDI in the short term but that this impact tends to fade over time. The common factor variable (Model 12) also has a positive and significant sign. The results from the GA index and the common factor variable are in-line with **Hypothesis 3**.

In terms of control variables, we find a non-significant relationship between OFDI and GDP per capita. According to Dunning's IDP theory (1981; 2001), the effects of GDP on OFDI vary at different stages of economic development. The GDP per capita in different provinces in China varies significantly and the gaps, in terms of economic development, between provinces in different regions are very large. Therefore, a study of the link between GDP per capita and OFDI at the provincial level would be more appropriate. However, such study is beyond the scope of this paper. The relationship between IFDI and OFDI is positive and significant. More IFDI, especially from developed countries, would bring advanced technologies and management skills, which would increase the ability of Chinese firms to engage in OFDI (Zhou, Li, & Tse, 2002). In addition, we identify a positive

relationship between our measure of human capital and OFDI. Our results indicate that exports and OFDI have a substitution effect, which is consistent with the literature (e.g. Gao et al. (2013)), however this result is not robust across the different models.

5.4. Robustness Checks

We perform a set of checks to verify the robustness of our findings. As indicated above, to deal with endogeneity concerns, we first estimate a specification of our model where all control variables have been lagged by one year. The results, presented in Appendix E Table E1, are in line with our main findings.

We also estimate a 2SLS model with instrumental variables. Results, presented in Appendix E Table E2 are broadly in line with our main findings in terms of our policy variables. When we apply the instrumental variables approach we continue to observe a non-significant relationship between GDP per capita and OFDI but we find a consistently positive and significant relationship between exports and OFDI. The Hausman test indicates the absence of endogeneity concerns in our model and the validity of the OLS methodology. Moreover, the overidentification test confirms the validity of our instruments.

As an additional robustness check, we estimate our model on a shorter time period between 1990 and 2015. The reason is that the Chinese government only started introducing Supervision, Services and Promotion policies after 1990. The results, presented in Appendix E Table E3, are consistent with our main findings and indicate that our results are not sensitive to the time framework of our analysis.

6. CONCLUSION AND DISCUSSION

The main contribution of this paper is to move forward the understanding of China's OFDI related policies and extend the ongoing debate on the importance of government policies in emerging markets, in general, and China, in particular, in influencing the foreign investments decisions of firms. More specifically, this paper builds a systematic OFDI policies framework, which could be potentially applied to other emerging countries. We mapped China's tiered institutional framework tasked with

regulating and supporting OFDI; this provides firms with a clear and recognised interlocutor in such matters. Our results fill a major gap in explaining how policies impact on OFDI trends. Our findings extend the existing literature on the important role of institutions in OFDI (Buckley et al., 2007; Dunning, 1981; Liu et al., 2005; Luo et al., 2010) in important ways and bring a richer understanding of the effects of China's OFDI policies in creating a government-created advantage that benefit firms and encourage a '*guided*' internationalisation.

From a methodological point of view, our main contribution is to create a series of indices that capture the changes of China's OFDI related policies and investigate the impact of these policies, quantitatively, on Chinese OFDI. To the best of our knowledge, we present the first archival series of indices that provide an objective and continuous measurement on China's OFDI policies since the OFDI was kicked off in 1980s. These indices can be potentially used in other research on China's OFDI policies.

Our results challenge the prevailing but preliminary conclusions of the current debate. Firstly, the current literature stipulates that the regulative environment of home countries constrains the foreign investment behaviour of firms (Buckley et al., 2007; Luo et al., 2010; Sauvant & Chen, 2014; Scott, 1995). Our results show that regulatory policies can boost OFDI when restrictions are released, and Supervision Policies introduced. We identify two groups of regulative policies: Regulation Policies and Supervision Policies. Only the constraints imposed by Regulation Policies, which regulate the approval process of the OFDI, make it more difficult for firms to invest in other countries. Easing these restrictions promote OFDI. In comparison, Supervision Policies urge firms to take actions to invest and grow in a sustainable way, so, even if they introduce further obligations on firms, these actually benefit firms if the additional obligations help reduce the liability of foreignness, and help firms build better relationships with stakeholders in host countries. Overall, Supervision Policies increase firms' confidence in international markets, encouraging more firms to carry out OFDI. This paternalistic supervision from government is also a government-created advantage.

When we turned to supportive policies, the existing consensus in the literature is that Promotion Policies are a very important driver of OFDI from emerging countries (Cui & Jiang, 2010). We also identify two groups: Service Policies and Promotion Policies. Contrary to the current

literature, we found that Promotion Policies have limited effects on the stock of China's OFDI. The reason is that the criteria for Promotion Policies are meant to narrowly target firms in certain sectors, diluting their impact on the overall economy. At the national level, government-created advantages seem to result from Service Policies which aim to compensate for firm level disadvantages such as lack of international experience.

Our results on the relative effectiveness of different types of policies provide the government of other emerging countries with a road map on how to promote firms' internationalisation through OFDI. China's government has had an effective OFDI policy framework to guide, drive and promote firms' internationalisation. Regulations and controls have been imposed and used as instruments for firms' upgrading, which in the long term has enhanced the chances of success of the foreign venture. Easing restrains, on the other hand, have signalled government' encouragement to initiate foreign investment. With a clear and visible institutional and policy framework, which has allowed the fine tuning of outflows of direct investment, China's OFDI have steadily grown in breadth and volume. The use of Service Policies that would compensate for firms' disadvantages also are found to be crucial. However, policymakers should not expect Promotion Policies to increase the overall volume of OFDI, as they have limited effects on OFDI at the national level. The set of policies that policy makers would adopt should therefore depend on their main objectives in terms of OFDI.

To the best of our knowledge, our study is the first to code policies and to econometrically assess their efficiency. Therefore, our research can be further developed. For instance, our methodology to code the policies does not allow us to capture how firms perceive each of these policies or any heterogeneity of this perception across different types of firms. A firm level survey that would explicitly investigate how firms react to these policies would complement and extend our work. To shed new lights on the role of government policies in emerging countries, and China in particular, as drivers of OFDI, we focused on the details of policies issued by the Chinese central government, which were applied nationwide and across all sectors and firms. Therefore, we are unable to apply more rigorous evaluation methodologies where policies are applied to certain firms, sectors or districts and where it is possible to apply a treatment approach (Donald & Lang, 2007), which would be a valuable extension of our work.

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FIGURES

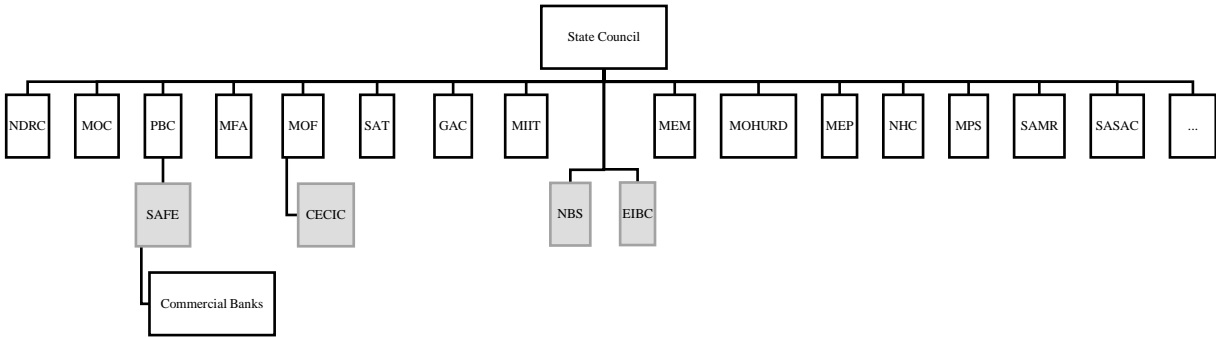


Figure 1 Hierarchy of China's OFDI related institutions in 2019.

Source: authors' elaboration.

Notes: ministerial level organisations are in the white boxes, while deputy ministerial level organisations are in the grey boxes. Each type of policy is under the responsibility of a different institution (see Table 3 for details). NDRC: National Development and Reform Commission; MOC: Ministry of Commerce; PBC: People’s Bank of China; SAFE: State Administration of Foreign Exchange; MFA: Ministry of Foreign Affairs; MOF: Ministry of Finance; CECIC: China Export and Credit Insurance Corporation; SAT: State Administration of Taxation; GAC: General Administration of Customs; MIIT: Ministry of Industry and Information Technology; NBS: National Bureau of Statistics; EIBC: Export-Import Bank of China; MEM: Ministry of Emergency Management; MOHURD: Ministry of Housing and Urban-Rural Development; MEP: Ministry of Ecology and Environment; NHC: National Health Commission; MPS: Ministry of Public Security; SAMR: State Administration for Market Regulation; SASAC: State-owned Assets Supervision and Administration Commission.

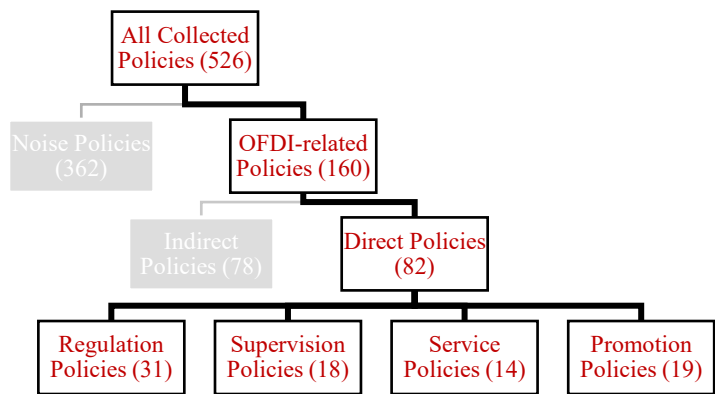


Figure 2 Hierarchy of China's direct OFDI-related policies.

Source: authors' elaboration.

TABLES

Table 1 Results of Collecting Policies

Research Method	Sources	Keywords	Numbers of Policies
Keywords Search	MOC	Foreign Investment	297
		Outward Investment	76
	SC	Foreign Investment	70
		Outward Investment	22
Supplementary Method	Literature	-	61
Total			526

Source: authors' elaboration.

Table 2 Summary of noise policies

Reasons of removing noise policies	Numbers of noise policies removed	Numbers of key policies left
Number of All Policies	-	526
Out of Sample Period	27	499
Repeated Policies	52	447
Sector Policies	102	345
Regional Policies	63	282
Draft Policies	12	270
Just Mentioned OFDI	6	264
Report of Name List of Policies	50	214
Ambiguous Keywords	10	204
Policies targets are not firms	41	163
Experimental Policies	3	160

Source: authors' elaboration.

Table 3 Summary of key direct policies

Policy Types	Aims	Numbers	Publishing Department
Regulation policies	Regulation (Approval/recording) policies were policies that described government's approval process, they regulated the process by expressing who and how would regulate which aspects.	31	NDRC, MOC, SAFE, SC
Supervision Policies	Supervision policies were used to supervise the operations of multinational firms. They were used to regulate firms after the OFDI had been approved and finished.	18	MOC, MOF, SAFE, NBS, MFA, SASAC, MEM, NDRC, MOHURD, MEP, NHC, SAMR, GAC, SAT.
Service Policies	Service policies were published by government to support Chinese firm's investment and operation in other countries by sharing information and providing communication platform.	14	MOC, NDRC, MFA,
Promotion Policies	Promotion policies were published by government to promote OFDI by providing financial support or giving privilege to firms.	19	SC, MOC, SAFE, MOF, PBC, SAT, NDRC, EBIC, CECIC, MIIT, GAC

Source: authors' elaboration.

Table 4 Summary of Data

Variable name	Variable Description	Observation Numbers	Mean	Std. Dev.	Min	Max
GDPPC	Real GDPPC in Yuan	35	14981.60	12462.70	2445.20	43983.39
EXP	Real Export in Yuan	35	4.82E+12	4.79E+12	1.81E+11	1.36E+13
EDU	Exact Def education	35	1.16E-4	1.33E-4	2.64E-6	4.01E-4
IFDI	Real IFDI Stock in Yuan	35	2.06E+12	1.83E+12	1.12E+10	6.66E+12
OFDI	Real OFDI Stock in Yuan	35	9.15E+11	1.44E+12	3.29E+08	5.99E+12
RPS5	Regulation Policy Index 5 Years Interval	35	3.08	3.97	-2.00	13.00
SU5	Supervision Policy Index 5 Years Interval	35	2.17	2.55	0.00	8.00
SE3	Service Policy Index 3 Years Interval	35	1.17	1.92	0.00	7.00
SE5	Service Policy Index 5 Years Interval	35	1.86	2.83	0.00	9.00
PP5	Promotion Policy Index 5 Years Interval	35	2.57	3.29	0.00	10.00
GA	Government Attitude Index: (Direct Policy)	35	2.34	3.16	0.00	12.00
GA3	Government Attitude Index (Direct Policy) 3 Years Interval	35	6.69	7.54	0.00	28.00
GA5	Government Attitude Index (Direct Policy) 5 Years Interval	35	10.54	11.41	0.00	40.00
F1	Common Factor Index	34	8.33E-09	0.97	-0.86	2.40

Table 5 Results of Phillips-Perron tests

Phillips-Perron test for unit root	Test Statistic Z(rho)	5% Critical Value	Test Statistic Z(t)	5% Critical Value	MacKinnon approximate p-value for Z(t)
Δ Log OFDI	-16.69	-12.76	-3.16	-2.98	0.02
Δ Log GDPPC	-15.25	-12.76	-2.98	-2.98	0.04
Δ Log IFDI	-5.17	-12.76	-1.78	-2.98	0.40
Δ Log Export	-31.46	-12.76	-5.67	-2.98	0.00
Δ Log Education	-39.56	-12.76	-7.75	-2.98	0.00
RPS5	-4.78	-12.79	-1.55	-2.98	0.51
SU5	-1.33	-12.79	-0.52	-2.98	0.89
SE3	-7.27	-12.79	-1.92	-2.98	0.32
SE5	-5.06	-12.79	-1.57	-2.98	0.50
PP5	-5.65	-12.79	-1.75	-2.98	0.40
GA	-21.89	-12.79	-3.84	-2.98	0.00
GA3	-5.65	-12.79	-1.70	-2.98	0.43
GA5	-3.69	-12.79	-1.36	-2.98	0.60
F1	-3.12	-12.76	-1.89	-2.98	0.68
$\Delta\Delta$ Log IFDI	-26.36	-12.72	-5.65	-2.98	0.00
Δ RPS5	-34.40	-12.76	-5.54	-2.98	0.00
Δ SU5	-40.87	-12.76	-7.23	-2.98	0.00
Δ SE3	-27.47	-12.76	-4.61	-2.98	0.00
Δ SE5	-26.41	-12.76	-4.37	-2.98	0.00
Δ SE5	-26.41	-12.76	-4.37	-2.98	0.00
Δ PP5	-35.41	-12.76	-6.11	-2.98	0.00
Δ GA3	-35.48	-12.76	-5.67	-2.98	0.00
Δ GA5	-32.37	-12.76	-5.05	-2.98	0.00
Δ F1	-23.22	-12.72	-4.05	-2.98	0.00

Table 6 Results of Johansen cointegration tests (1)

Maximum rank	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
0	88.51	136.77	159.35	134.44	135.85	114.02	120.75	125.54	127.25	133.83	138.49	133.14
1	49.53	84.35	102.01	89.25	85.70	70.23	78.75	83.04	86.01	89.07	87.50	82.67
2	27.61*	52.37	53.60	50.65	48.21	36.28*	41.51*	45.60*	48.59	50.24	52.16	47.62
3	12.20	25.02*	24.09*	24.30*	22.87*	18.96	19.89	23.72	29.72	27.81*	26.30*	25.12*
4	3.65	9.03	12.31	11.62	10.19	6.14	8.86	11.72	12.53*	12.12	11.00	11.33
5		1.99	5.22	4.33	4.00	1.46	3.05	3.39	3.26	4.34	3.75	4.28

*Number of cointegration vectors suggested by Johansen's cointegration test

Table 7 Results of the determinants of China's OFDI (1981 – 2015)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$	$\Delta\text{Log OFDI}$
$\Delta\text{Log GDPPC}$	2.15*	1.34	1.23	1.38	1.14	0.50	1.81	2.10*	1.34	0.92	0.86	0.68
	(1.05)	(1.07)	(1.05)	(1.08)	(1.10)	(1.19)	(1.10)	(1.14)	(1.00)	(1.06)	(1.21)	(1.14)
$\Delta\text{Log IFDI}$	1.31***	1.53***	1.60***	1.58***	1.55***	1.65***	1.47***	1.34***	1.59***	1.68***	1.63***	1.70***
	(0.23)	(0.24)	(0.23)	(0.26)	(0.26)	(0.26)	(0.32)	(0.26)	(0.26)	(0.28)	(0.29)	(0.27)
$\Delta\text{Log Export}$	-0.49*	-0.41	-0.33	-0.38	-0.46*	-0.33	-0.49*	-0.49*	-0.50**	-0.44*	-0.37	-0.32
	(0.25)	(0.26)	(0.25)	(0.28)	(0.25)	(0.25)	(0.27)	(0.25)	(0.24)	(0.26)	(0.27)	(0.26)
$\Delta\text{Log Education}$	0.22***	0.22***	0.23***	0.23***	0.22***	0.24***	0.22***	0.22***	0.21***	0.22***	0.23***	0.24***
	(0.06)	(0.06)	(0.05)	(0.05)	(0.06)	(0.05)	(0.06)	(0.06)	(0.05)	(0.05)	(0.06)	(0.05)
Regulation Policy Index (5 years interval)		0.02*										
		(0.01)										
Lagged Regulation Policy Index (5 years interval)			0.02**									
			(0.01)									
Supervision policy Index (5 years interval)				0.03*								
				(0.01)								
Service policy Index (3 years interval)					0.03**							
					(0.01)							
Service policy Index (5 years interval)						0.03**						
						(0.01)						
Promotion Policy Index (5 years interval)							0.01					

													(0.01)
GA Index													0.00
													(0.01)
Lagged GA Index every year													0.02***
													(0.01)
GA Index (3 year interval)													0.01**
													(0.00)
GA Index (5 year interval)													0.01
													(0.00)
Common Factor Index													0.10**
													(0.04)
Constant	-0.10	-0.13*	-0.16*	-0.16*	-0.11	-0.11	-0.13	-0.11	-0.14	-0.15*	-0.14	-0.07	
	(0.08)	(0.08)	(0.08)	(0.09)	(0.08)	(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.08)	(0.08)	(0.08)
Observations	34	34	34	34	34	34	34	34	34	34	34	34	34
R-squared	0.71	0.74	0.76	0.73	0.74	0.75	0.72	0.71	0.75	0.75	0.73	0.75	
Robust standard errors in parentheses													
*** p<0.01, ** p<0.05, * p<0.1													

APPENDICES

Appendix A China National Plans and Strategic Policies since 1949

Table A1 China National Plans and Strategic Policies since 1949

National Plans	Period	Keywords	Strategy Policies		
First Plan	1953 – 1957	Increase the growth rate of industry. Overtake UK and Catch up with US			
Second Plan	1958 – 1962	Great Leap Forward. Retrogression			
Third Plan	1966 – 1970	Three-line construction. Preparing against natural disasters			
Fourth Plan	1971 – 1975	Seriously out of control. Strategic adjustment			
Fifth Plan	1976 – 1980	A new leap forward. The Great Transformation	<i>Open Door Policy (1978)</i>		
Sixth Plan	1981 – 1985	To reform and opening up			
Seventh Plan	1986 – 1990	Pass through the reform. Rectification			
Eighth Plan	1991 – 1995	Xiaoping's southern tour. The tide of reform			
Ninth Plan	1996 – 2000	Macro-control. The economy to a soft landing		<i>Go Global Policy (1999)</i>	
Tenth Plan	2001 – 2005	Orders and command out. Market allocate resources			
Eleventh Plan	2006 – 2010	Continue reform and opening up			
Twelfth Plan	2011 – 2015	-			<i>One Belt One Road (2013)</i>
Thirteenth Plan	2016 – 2020	-			

Source: authors' elaboration and People's Daily Online (<http://dangshi.people.com.cn/GB/151935/204121/>)

Appendix B An example of indirect policy

We bring here an example of an indirect policy, where only a paragraph or sentences mentioned OFDI. In 2012, MOC and other ten ministries jointly issued *guidance opinions on speeding up the transformation of foreign trade development*. In this policy, it said that

“Each department should accelerate the improvement of the foreign investment promotion system and service support system, encourage enterprise to carry out overseas investment cooperation. Support renewable energy enterprises to enhance the ability to obtain overseas renewable energy. Actively participate in global economic governance, accelerate the implementation of the FTA strategy, deepen bilateral and regional economic and trade cooperation, create a favourable external environment for development. Strengthening the protection of intellectual property rights, expand the multilateral and bilateral communication and cooperation in the field of intellectual property. (2012: 1)”

As can be seen from the policy content above, the policies said that OFDI should be encouraged in aspects such as service support system, but it did not provide any specific measures. The service support system may be optimised in the future, but it had not been changed immediately after this policy was published. Firms had not acquired more service such as information of host countries. Hence, OFDI would not be promoted until further specific policies would be published. Therefore, without specific measures, indirect policies were less likely to have an effect on the volume of OFDI, and the policies that could affect the national level of volume of OFDI were only direct policies.

Appendix C Graphs of Indices



Figure C1 China's OFDI related Regulation Policies from 1982 to 2015
Source: authors' elaboration.

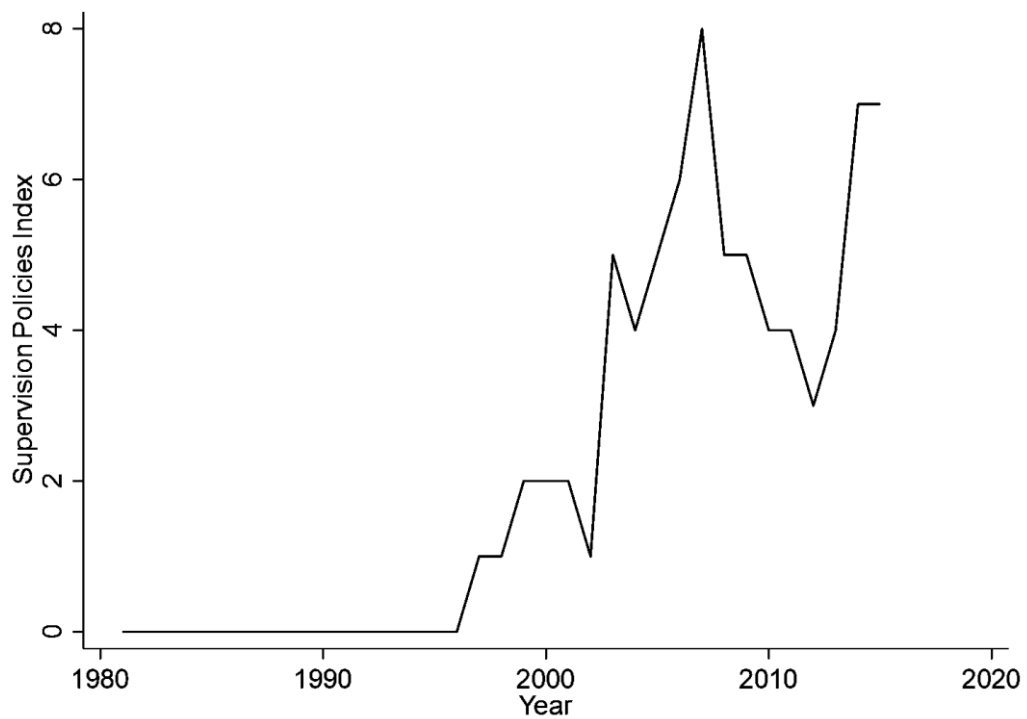


Figure C2 China's OFDI related Supervision Policies from 1981 to 2015
Source: authors' elaboration.

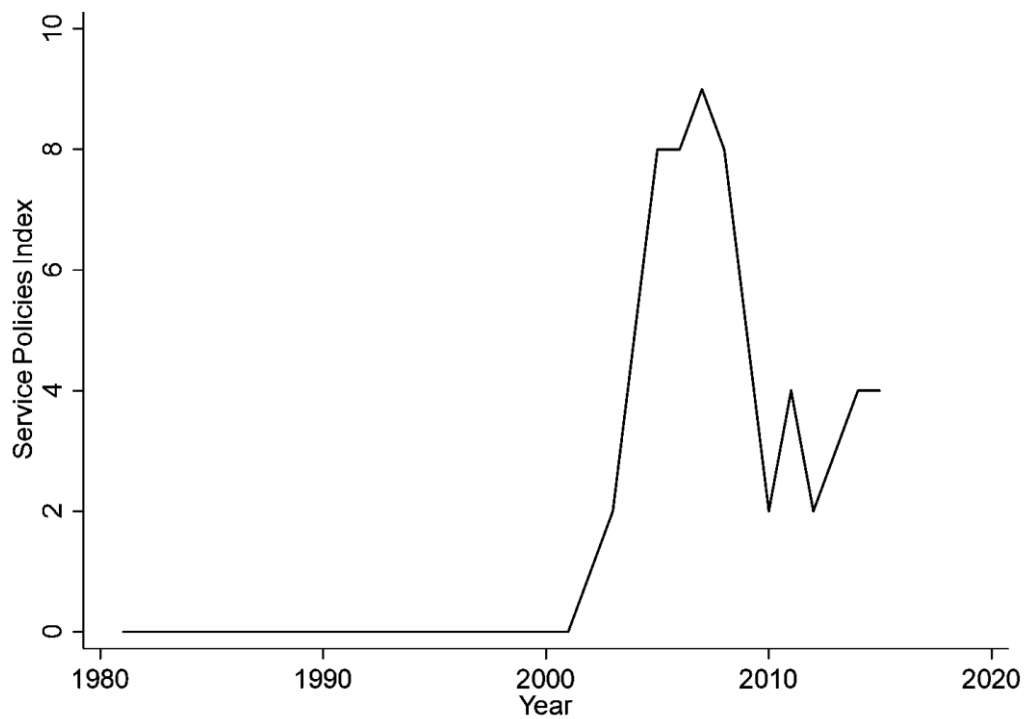


Figure C3 China's OFDI related Service Policies from 1981 to 2015
 Source: authors' elaboration.

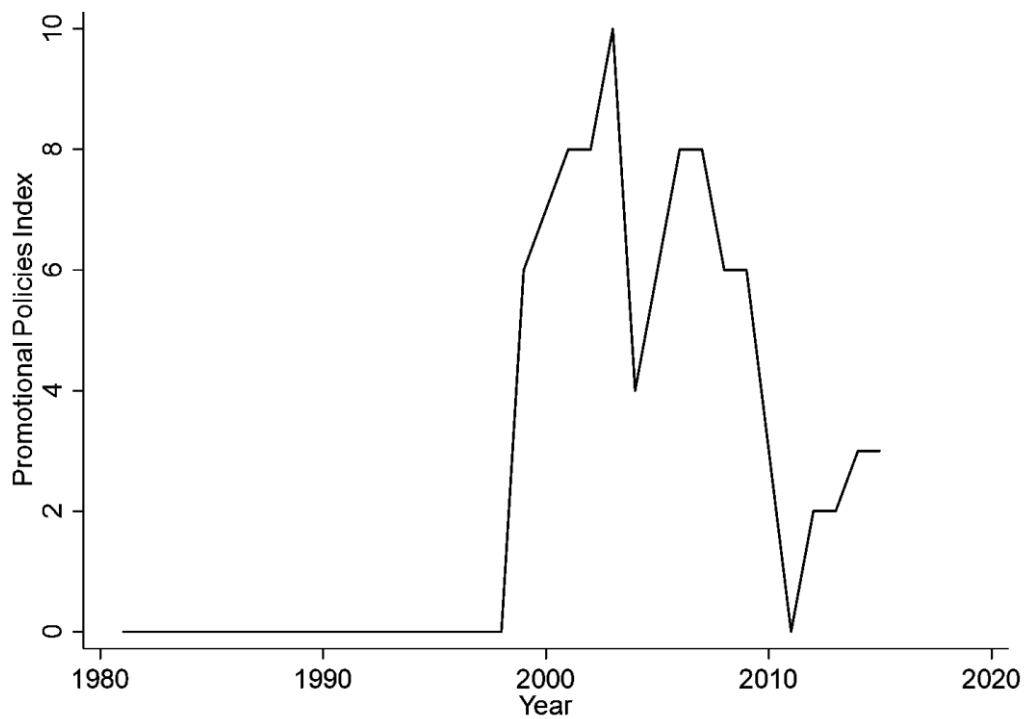


Figure C4 China's OFDI related Promotion Policies from 1981 to 2015
 Source: authors' elaboration.

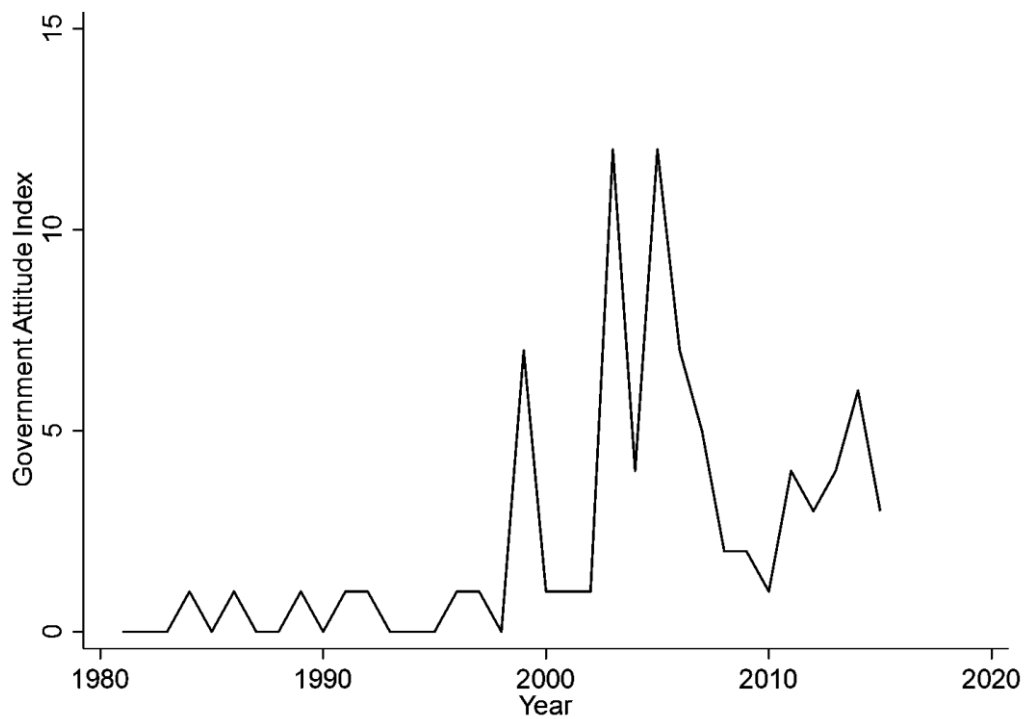


Figure C5 Government Attitude Index from 1981 to 2015
Source: authors' elaboration.

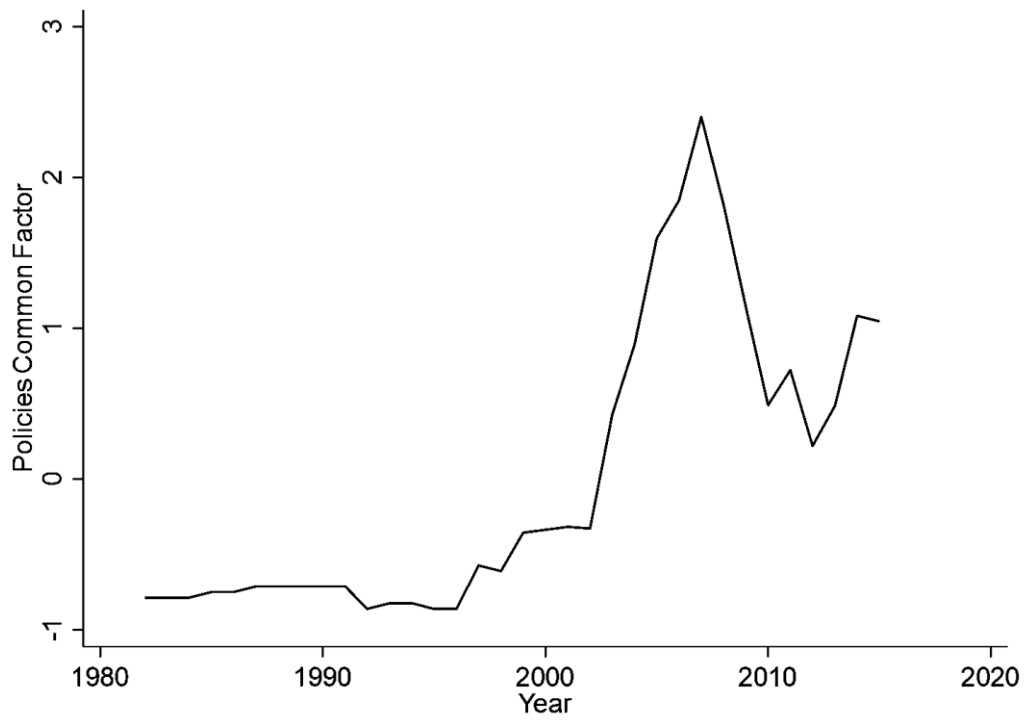


Figure C6 China's OFDI Policies Common Factor from 1982 to 2015
Source: authors' elaboration.

As can be seen, the patterns of each index were similar. Before 2000, the indices were relatively at a lower level. Around the year 2000, the indices increased dramatically and reached the peak around the year 2010. After that, each index dropped back and forth for few times.

Before the year 1996, all published policies were Regulation Policies. In the next stage which coincided with the most dramatic increases for all of the indices around the year 2000, the Supervision Policies index started to increase in 1996 then, the Promotion Policies index started to increase in 1999. The Service Policies and Regulation Policies started to increase in the year 2002 and 2003 which was after the Go Global Policy has been formally published in the early 2000s when it was added to the tenth Five Year Plan in 2001.

From 1997 to 2014, the government published Supervision Policies regularly, except in the year 1998, 2000 to 2002, 2004, 2009 and 2010. The content of these policies was in several aspects linked to keeping firms healthy in financial aspects, standardize statistic system in order to keep the authority of data, carrying out annual inspection and risk report system.

Appendix D Exploratory Factor Analysis

We apply an exploratory factor analysis to extract a common factor index that would represent the common variance of our four policy indices. As can be seen from our hypotheses and the results of the main specification test in the Table 7, each type of the specific policies has one index that can best capture the impact of the policies on the volume of OFDI. Those four indices are Lagged Regulation Policy Index (5 years interval), Service policy Index (5 years interval), Supervision policy Index (5 years interval) and Promotion Policy Index (5 years interval). We have four measured variables and 34 observations, which meet the preconditions of the exploratory factor analysis (Fabrigar, Wegener, MacCallum, & Strahan, 1999).

We start by testing whether the four indices are correlated, which is one of the preconditions of this analysis.

Table D1 Correlation Matrix of policy indices

	Lagged Regulation Policy Index (5 years interval)	Supervision policy Index (5 years interval)	Service policy Index (5 years interval)	Promotion Policy Index (5 years interval)
Lagged Regulation Policy Index (5 years interval)	1.0000			
Supervision policy Index (5 years interval)	0.7815	1.0000		
Service policy Index (5 years interval)	0.8708	0.8660	1.0000	
Promotion Policy Index (5 years interval)	0.4279	0.6610	0.5707	1.0000

We also carry out the test for the determinants of the correlation matrix (0.032), Bartlett test of sphericity (the null hypothesis that variables are not intercorrelated was rejected) and the Kaiser-Meyer-Olkin measure of sampling adequacy (0.767). The results indicate that the exploratory factor analysis is appropriate. The results are presented in the table below:

Table D2 Results of exploratory factor analysis

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	2.87290	2.67155	0.9930	0.9930
Factor2	0.20135	0.27128	0.0696	1.0625
Factor3	-0.06993	0.04112	-0.0242	1.0384
Factor4	-0.11104	.	-0.0384	1.0000
LR test: independent vs. saturated: $\chi^2(6) = 109.86$; $\text{Prob} > \chi^2 = 0.0000$				

Table D3 Factor loadings (pattern matrix) and unique variances

Variable	Factor 1	Factor 2	Uniqueness
Lagged Regulation Policy Index (5 years interval)	0.8620	-0.2639	0.1874
Supervision policy Index (5 years interval)	0.9194	0.1208	0.1402
Service policy Index (5 years interval)	0.9423	-0.0960	0.1029
Promotion Policy Index (5 years interval)	0.6299	0.3285	0.4953

As can be seen, the Factor 1 captures 99.3% of the variance of the four indices. Therefore, we use Factor 1 as our common factor index.

Appendix E Robustness Checks

Table E1 Results of the determinants of China's OFDI by using one-year-lagged independent variables (1981 – 2015)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI
Lagged ΔLog GDPPC	2.06 (2.18)	0.28 (2.29)	0.62 (2.58)	1.38 (2.31)	1.27 (2.25)	0.12 (2.65)	1.91 (2.20)	2.06 (2.22)	1.55 (2.18)	1.29 (2.25)	0.60 (2.56)	0.45 (2.52)
Lagged ΔLog IFDI	0.99*** (0.30)	1.48*** (0.37)	1.37*** (0.35)	1.30*** (0.34)	1.32*** (0.35)	1.48*** (0.37)	1.12*** (0.40)	1.00*** (0.34)	1.23*** (0.33)	1.39*** (0.36)	1.46*** (0.38)	1.50*** (0.37)
Lagged ΔLog Export	-0.02 (0.31)	0.10 (0.30)	0.11 (0.33)	0.05 (0.32)	-0.13 (0.30)	-0.01 (0.29)	-0.02 (0.31)	-0.02 (0.31)	-0.05 (0.31)	-0.09 (0.31)	0.04 (0.31)	0.05 (0.30)
Lagged ΔLog Education	-0.28* (0.16)	-0.30** (0.15)	-0.28* (0.15)	-0.28* (0.15)	-0.30* (0.16)	-0.28* (0.15)	-0.28* (0.16)	-0.28* (0.16)	-0.29* (0.16)	-0.30* (0.15)	-0.28* (0.15)	-0.28* (0.15)
Regulation Policy Index (5 years interval)		0.03** (0.01)										
Lagged Regulation Policy Index (5 years interval)			0.03** (0.01)									
Supervision policy Index (5 years interval)				0.03* (0.01)								
Service policy Index (3 years interval)					0.05** (0.02)							
Service policy Index (5 years interval)						0.04*** (0.01)						

Promotion Policy Index (5 years interval)													0.01 (0.02)
GA Index													0.00 (0.01)
Lagged GA Index every year													0.02** (0.01)
GA Index (3 year interval)													0.01** (0.00)
GA Index (5 year interval)													0.01** (0.00)
Common Factor Index													0.12*** (0.04)
Constant	-0.04 (0.18)	-0.10 (0.16)	-0.09 (0.17)	-0.11 (0.19)	-0.08 (0.18)	-0.05 (0.18)	-0.08 (0.20)	-0.05 (0.19)	-0.09 (0.18)	-0.13 (0.18)	-0.11 (0.18)	-0.01 (0.19)	
Observations	33	33	33	33	33	33	33	33	33	33	33	33	
R-squared	0.49	0.57	0.56	0.51	0.54	0.56	0.49	0.49	0.52	0.53	0.53	0.55	
Robust standard errors in parentheses													
*** p<0.01, ** p<0.05, * p<0.1													

Table E2 Results of the determinants of China's OFDI by using 2SLS (Instrument variables: Population and GDP per capita of first industry, lagged ΔLog GDPPC, lagged ΔLog Export) (1981 - 2015)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
VARIABLES	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI	ΔLog OFDI
ΔLog GDPPC	3.29 (3.49)	2.55 (3.65)	1.36 (2.55)	3.06 (4.22)	0.94 (3.16)	0.78 (3.81)	3.08 (3.08)	2.45 (2.61)	1.90 (3.16)	1.78 (3.19)	2.35 (4.17)	1.62 (3.85)
ΔLog IFDI	0.30 (1.07)	0.61 (1.15)	0.32 (0.85)	1.44 (1.97)	0.06 (0.56)	0.67 (1.05)	0.32 (0.76)	-0.06 (0.56)	0.17 (0.68)	0.41 (0.64)	0.86 (1.16)	1.11 (1.48)
ΔLog Export	1.24*** (0.25)	1.50*** (0.25)	1.64*** (0.24)	1.72*** (0.41)	1.52*** (0.32)	1.69*** (0.28)	1.32*** (0.32)	1.25*** (0.29)	1.49*** (0.29)	1.56*** (0.33)	1.59*** (0.30)	1.80*** (0.34)
ΔLog Education	0.23** (0.12)	0.21 (0.13)	0.23** (0.09)	0.19 (0.18)	0.24*** (0.09)	0.23* (0.13)	0.23** (0.10)	0.25*** (0.08)	0.23** (0.09)	0.23** (0.10)	0.21 (0.14)	0.20 (0.15)
Regulation Policy Index (5 years interval)		0.02* (0.01)										
Lagged Regulation Policy Index (5 years interval)			0.03*** (0.01)									
Supervision policy Index (5 years interval)				0.05* (0.03)								
Service policy Index (3 years interval)					0.03 (0.02)							
Service policy Index (5 years interval)						0.04** (0.02)						

Promotion Policy Index (5 years interval)													0.01
													(0.02)
GA Index													-0.00
													(0.01)
Lagged GA Index every year													0.02
													(0.01)
GA Index (3 year interval)													0.01
													(0.01)
GA Index (5 year interval)													0.01
													(0.01)
Common Factor Index													0.14**
													(0.06)
Constant	-0.28	-0.36	-0.28	-0.59	-0.15	-0.27	-0.29	-0.17	-0.24	-0.29	-0.41	-0.33	
	(0.36)	(0.35)	(0.26)	(0.49)	(0.24)	(0.33)	(0.26)	(0.20)	(0.27)	(0.22)	(0.32)	(0.38)	
Hausman Test	1.46	1.35	1.69	1.26	3.65	1.77	1.92	3.94	2.38	2.33	1.62	1.51	
P-value	0.83	0.93	0.89	0.94	0.60	0.88	0.86	0.56	0.80	0.80	0.90	0.91	
Overid	1.61	1.02	1.63	0.48	1.32	0.92	1.55	2.61	0.95	1.03	0.74	0.84	
P-value	0.44	0.60	0.44	0.79	0.52	0.63	0.46	0.27	0.62	0.60	0.70	0.66	
Observations	33	33	33	33	33	33	33	33	33	33	33	33	
R-squared	0.55	0.50	0.68	0.06	0.68	0.56	0.56	0.67	0.65	0.58	0.39	0.35	
Robust standard errors in parentheses													
*** p<0.01, ** p<0.05, * p<0.1													

Table E3 Results of the determinants of China's OFDI (1990 – 2015)

VARIABLES	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$	$\Delta\text{Log OFID}$
$\Delta\text{Log GDPPC}$	2.00 (1.49)	0.99 (0.89)	0.97 (1.00)	1.32 (1.32)	0.77 (1.01)	0.02 (0.81)	1.88 (1.51)	1.95 (1.52)	1.40 (1.19)	0.76 (0.98)	0.28 (1.00)	0.44 (0.92)
$\Delta\text{Log IFDI}$	0.16 (0.21)	0.39** (0.18)	0.50** (0.19)	0.45* (0.23)	0.39** (0.17)	0.51*** (0.16)	0.27 (0.26)	0.21 (0.23)	0.45** (0.21)	0.57*** (0.19)	0.53** (0.19)	0.58*** (0.19)
$\Delta\text{Log Export}$	-0.21 (0.23)	0.01 (0.26)	0.08 (0.23)	-0.01 (0.29)	-0.17 (0.17)	0.10 (0.20)	-0.22 (0.25)	-0.25 (0.23)	-0.28 (0.19)	-0.17 (0.20)	0.05 (0.27)	0.10 (0.23)
$\Delta\text{Log Education}$	-0.57*** (0.20)	-0.73*** (0.20)	-0.53** (0.23)	-0.61*** (0.20)	-0.80*** (0.15)	-0.68*** (0.16)	-0.61** (0.23)	-0.62*** (0.21)	-0.62*** (0.17)	-0.72*** (0.16)	-0.69*** (0.20)	-0.64*** (0.19)
Regulation Policy Index (5 years interval)		0.02** (0.01)										
Lagged Regulation Policy Index (5 years interval)			0.02*** (0.01)									
Supervision policy Index (5 years interval)				0.03** (0.01)								
Service policy Index (3 years interval)					0.04*** (0.01)							
Service policy Index (5 years interval)						0.03*** (0.01)						

Promotion Policy Index (5 years interval)													0.01
													(0.01)
GA Index													0.01
													(0.01)
Lagged GA Index every year													0.02***
													(0.01)
GA Index (3 year interval)													0.01***
													(0.00)
GA Index (5 year interval)													0.01***
													(0.00)
Common Factor Index													0.10***
													(0.03)
Constant	0.08	0.05	0.01	-0.00	0.10	0.09	0.05	0.07	0.03	0.03	0.04	0.10*	
	(0.10)	(0.06)	(0.06)	(0.08)	(0.07)	(0.05)	(0.10)	(0.10)	(0.08)	(0.06)	(0.06)	(0.06)	
Observations	26	26	26	26	26	26	26	26	26	26	26	26	
R-squared	0.44	0.63	0.67	0.57	0.69	0.73	0.46	0.46	0.66	0.69	0.65	0.70	
Robust standard errors in parentheses													
*** p<0.01, ** p<0.05, * p<0.1													