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**Foreign Direct Investments and Sustainability: an
empirical analysis through China's experience**

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提要

1978 年中国经济改革开放后，外国直接投资开始流入，多年来呈指数增长，直到 21 世纪初大幅扩张至今，极大地促进了国家经济增长。

外商直接投资对像中国这样的发展中国家有很大的帮助，虽然仍然带来了应该考虑的负方面，但是最重要的是，产生差异的是正方面。

决定考虑像中国这样的国家，是因为这个国家在过去 40 年中经历了无数次经济和结构转型，成为国内和国际环境中复杂进程的一部分未崩溃，相反，变得越来越成熟和发达。

然而，随着外商直接投资给中国带来巨大的经济发展和变化，对环境的影响不容小觑：事实上，随着所有这些投资的到来，中国在污染方面受到了严重的影响。

现有文献中关于外国直接投资对环境影响的最重要的陈述之一是“污染避难所假说”。在经济发展的初期，发展中国家通常倾向于放宽环境监管标准，加快自然资源的利用，生产更多污染密集型产品，以吸引更多外资流入。

特别是，本文的目的和目标是分析外国直接投资除了带来巨大的经济增长效益外，是否还能带来可持续性的效益。

在这项研究中，可持续性不仅要理解为生态和环境，而且要理解为经济和社会。

本研究分析的可持续性的三个维度包括经济、环境和社会。经济可持续性意味着保证企业经济效率和收入的能力；环境可持续性是指保持自然资源质量、可重复性和可用性的能力；最后，社会可持续性意味着有能力保证与就业、工资、安全、健康、教育、民主、参与、正义相关的生活质量和人类福祉条件，按阶级和性别平等分配。

这三个方面是密切相关的，事实上，有了其中一个方面的存在，这三个方面更有可能同时存在，从而使国家能够保障所有公民的福祉。

现在，对于一个国家来说，通过更有效的实践和长期行为来保护其公民和国家福祉，制定可持续发展目标至关重要。联合国将可持续性一词定义为：“在不损害后代满足其自身需求的能力的情况下满足当代人的需求”。

在我个人看来，有趣的是，通过分析政府在这个问题上的各种举措，看看外国直接投资如何以及是否能够每年带来更高水平的可持续性，看看这个问题是如何处理的，以及这个国家是否是 最近在努力改进这方面。

外国直接投资在促进中国经济增长中的作用早已得到学者们的证实，它主要通过各种因素促进东道国经济的发展，但随着 2020 年头几个月 Covid-19 大流行的到来，外国直接投资的结构发生变化。

简而言之，可以说，尽管中国仍然是一个对外国投资者具有高度吸引力的国家，但随着大流行病的到来，以及最近俄罗斯和乌克兰之间的战争局势，有各种因素已经并正在导致中国吸引投资的能力下降。

为了更具体地了解这篇论文，我们决定将研究分成四个主要章节：

在第一章，除了对外国直接投资进行总体介绍，完成定义和简要总结，为研究什么是外国投资和如何分类奠定基础外，还将对外国直接投资和可持续性之间的关系进行文献回顾。特别是，我们认为首先对这一主题进行国际文献综述，了解国际上的学者对外国直接投资和可持续性之间的关系的看法，然后再进行中国学者的文献综述，特别关注中国的外国直接投资和可持续性之间的关系，这样做更有效率。

在第二章，我们将特别针对中国讨论外国直接投资的问题。具体来说，首先将对外国直接投资通常对东道国产生的影响进行总体概述，以便对外国直接投资如何影响一个国家的发展达到良好的总体理解。为了深入了解中国的情况，似乎也有必要做一个简单的概括，因为多年来，已经或多或少能够突出外国直接投资对一个国家的积极和消极方面，而且结果适用于许多接着。第二章，将简要概述自 1978 年后的经济开放和改革时期以来外国直接投资在中国的历史和发展。概述这样一个方面是很有意义的，可以让读者了解这些年来国家经济增长的速度以及外国直接投资的速度和重要性。具体来说，外国直接投资先是适度增长，然后呈指数增长，近年来达到稳定的增长速度。

第二章的最后一节相当深入地探讨了投资者喜欢以何种进入模式接近该国，以及他们选择投资的行业最多。认识到各行业之间的差异以及外国投资者在中国集中

关注的何种行业是很重要的，因为通常情况下，根据行业的不同，更容易理解外国直接投资和可持续性之间存在什么样的关系。在本段中，将主要考虑股权进入模式。

考虑对外国投资者最有吸引力的行业的部分可以帮助这个研究：通过研究投资者青睐的行业，我们可以了解投资是否会越来越有创新性，因此，可持续发展，当然也有例外情况。

有了第三章，就有了研究的核心。本章主要分为三个部分：第一部分将讨论外国直接投资对中国经济的影响，特别是将重点放在技术上。技术将是整个论文中反复出现的主题，因为正如后来发现的那样，它是实现可持续性的重要手段。通常，高科技是可持续性和创新的同义词，这就是为什么它被认为对研究目的非常重要。我们将探讨外国直接投资给中国带来的技术溢出，因为它是一个需要考虑的基本要素。作为构成可持续发展的三个要素之一，分析外国直接投资对中国经济有什么样的影响是很有意义的，以便了解除了毫无疑问已经发生并继续发生的经济增长之外，这种增长从各个角度来看也是可持续的，以便日益发展成为一个绿色经济国家；第二，将分析外国直接投资对环境的影响。这一点特别重要，因为特别是在最近几年，环境保护变得越来越重要，并被置于许多其他方面之上。随着外国直接投资的出现，中国的环境状况越来越差。然而，近年来，政府试图出台一些政策和法规，也对这方面进行控制，以避免其环境状况进一步恶化。看到外国直接投资对中国环境的影响，也有助于了解通过发现外国直接投资、环境和外国直接投资监管之间的关系，可以避免这方面的许多问题；第三，将讨论可持续性的最后一个组成部分：社会。为了总结外国直接投资对国家的影响以及它是否能成为中国追求可持续发展的手段，我们将分析它对社会的影响。特别是，我们将讨论外国直接投资与公民的就业和福利之间的关系。我们认为这很重要，因为当讨论绿色经济时，它意味着可持续的增长，除了社会福利水平的提高外，还包括工人的公平报酬。

最后一点是需要考虑到整个中国的情况，并理解通过外国直接投资的影响（积极或消极），它是否可以被用作一种工具，使国家在各方面越来越可持续。

第四章，也是最后一章，将是对政府采取的法规 and 政策的回顾。特别是，将涉及各种主题：中国关于环境保护和外国投资法的法规和立法的总体发展；中华人民共和国商务部认为是负面的投资清单；《中国制造 2025》；第十三和第十四个五年计划。

《环境保护法》在外国直接投资不断涌入中国后发挥了重要作用，因为莫些投资严重破坏了环境状况，多年来，该法经过更新和修订，越来越有效。至于 FIL（外国投资法），是在 2019 年颁布的。这部法律至关重要，因为它强调了政府一直致力于保护其国家免受不公平或无利可图的投资，因为这些投资可能不会带来好处。特别是，它不鼓励由商务部制定的负面清单上的投资，这将在本一章的最后个章节中说明，以分析进入中国国内的投资是如何被过滤的。

另一方面，关于“中国制造 2025”和“十三五”、“十四五”规划，我们决定将其纳入考虑范围，以了解可持续性是否存在于中国的长期计划中，以及是否与国家的增长和发展相辅相成。

总之，可以说，本论文的结构旨在了解外来的外国直接投资如何以及是否有助于国家的可持续发展。

鉴于可持续增长的重要性，即从各个角度来看都有利于公民和国家的总体福利，其目的正是要勾勒出外国直接投资在中国所发挥的作用，并了解通过政府的持续承诺和改进，是否能够在最好的近期内实现改变国家命运的目标和发展，使之更好。

研究主要包括这些，试图用现有的信息把所有的碎片放在一起，试图抓住一个系统的优势和劣势，这个系统是在其经济、环境和社会结构的巨大变化的力量下形成的，并且每天都在努力实现它为自己设定的许多目标，其中包括可持续性。

TABLE OF CONTENTS

提要.....	I
Introduction and Research Goals.....	1
1. Literature review and relationship between foreign direct investment and sustainability.....	7
1.1 International literature review on the relationship between FDI and sustainable development: what are the characteristics that FDI should present in order to promote sustainability?.....	10
1.2 Chinese literature review on the relationship between FDI and sustainable development.....	14
1.1.2 The “pollution haven” hypothesis and the Porter Effect.....	16
2. Inward Foreign Direct Investment in China.....	20
2.1 General impact of FDI on the host country and development of FDI in China.....	20
2.2 What are the entry modes employed in China and is there any distinction among the different industries?.....	26
3. Can FDI become a tool for fostering sustainability in China?.....	35
3.1 FDI impact on Economy.....	35
3.1.1 FDI Technology Spillover Effect in China.....	42
3.2 FDI impact on environment.....	47
3.3 FDI impact on society.....	56

4. FDI, Policies, Plans and Environmental Regulation	63
4.1 MOFCOM: Negative List of Foreign Investments.....	72
4.2 MADE IN CHINA 2025 (中国制造 2025).....	79
4.3 13 th and 14 th Five-Year Plans.....	85
Conclusions	90
Bibliography and Sitography	98

INTRODUCTION AND RESEARCH GOALS

After China's economic reform and opening-up in 1978, an inflow of Foreign Direct Investment began, which increased exponentially over the years until a big expansion in the early 2000s to the present day, which greatly aids the country's economic growth.

Foreign Direct Investment can be of great help to a developing country like China, although it still brings negative aspects that should be considered, but, above all, it is the positive ones that make the difference.

The decision to consider a country like China is due to the fact that this country has undergone numerous economic and structural transformations over the last 40 years, thus becoming part of complex processes in the domestic and international environment without ever breaking down, on the contrary, becoming more and more established and developed.

However, following the great economic development and change in China brought about by FDI, the impact that it had on the environment should not be underestimated: in fact, with the arrival of all these investments, the country has suffered serious repercussions in terms of pollution.

One of the most significant statements regarding the impact of FDI on the environment in the existing literature is the "pollution haven" hypothesis. In the early stages of economic development, developing countries, usually, tend to relax their environmental regulation standards, accelerate the utilization of natural resources, and produce more pollution-intensive products to attract more foreign capital inflows¹.

In particular, the aim and objectives of this thesis are to analyze whether, in addition to the great economic growth benefit they bring, FDI can also bring benefits in terms of sustainability.

Sustainability, in this research, is not only to be understood as ecological and environmental, but also economic and social.

The three dimensions of sustainability analyzed in this research include economic, environmental and social. With economic sustainability is meant the ability to guarantee

¹ LIU, Shenglong, ZHANG, Penglong, *Foreign Direct Investment and air pollution in China: evidence from the global financial crisis*, School of public policy and management, Tsinghua University, Beijing, 2022.

economic efficiency and income for businesses; with environmental sustainability is meant the ability to maintain the quality, reproducibility and availability of natural resources; and finally, with social sustainability is meant the ability to guarantee the quality of life and the conditions of human wellbeing linked to employment, wages, security, health, education, democracy, participation, justice, equally distributed by class and gender.

These three aspects are closely related to each other, in fact, with the presence of one of these aspects, it is more likely that all three will be present, allowing the country to guarantee wellbeing for all citizens.

Setting sustainability goals is now essential for a country to protect its citizens and the nation's welfare through more effective practices and conduct over the long term. The United Nations defines the term sustainability as: "meeting the needs of the present without compromising the ability of future generations to meet their own needs".

In my personal opinion, it is interesting to see how and whether FDI can lead to a higher level of sustainability from year to year, also by analyzing the various government initiatives on the subject to see how the issue is dealt with and whether the country is making efforts to improve this aspect recently.

The role of FDI in promoting China's economic growth has long been confirmed by scholars and it mainly promotes the development of the host economy through various elements, but with the advent of the Covid-19 Pandemic in the first months of 2020, something in the FDI inflow structure of China changed.

Briefly, it could be said that although China is still a highly attractive country for foreign investors, with the arrival of the Pandemic and, more recently, the war situation between Russia and Ukraine, there are various elements that have led and are leading China to have a decline in inward investment.

According to scholars Zhai and Wang (2022), the impact of the pandemic on China's FDI inflow can be divided into three main channels:

1. Direct Channel (The New Covid-19 Pandemic has affected China's openness to the outside world and the facilitation of cross-border investment and financing, and this has a negative impact on FDI inflows);

2. Labor Channel (The physical isolation generated by the Pandemic affects labor force numbers, labor force health status and labor costs, which in turn have a negative impact on FDI inflows);
3. Macroeconomic channel (When faced with major risks, investors' expectation of disaster risk will reduce the enthusiasm of enterprises to invest and international investment will also suffer a major impact, moreover, the normalization of the pandemic will change the consumption habits of Chinese residents to a certain extent, changing the market preferences and industrial structure, which will have an indirect impact on the country's FDI inflows).²

To get more specific about this dissertation, the decision was to part the research into four main chapters:

In the first chapter, in addition to a general introduction about FDI complete with a definition and a brief summary to lay the groundwork for the research on what Foreign Investments are and how they are classified, it will be done a literature review on the relationship between foreign direct investment and sustainability. In particular, it was considered more efficient to first conduct an international literature review on the topic, to understand what scholars on the international scene think about the relationship between FDI and sustainability, and then move on to a literature review of Chinese scholars with a focus specifically on the relationship between FDI and sustainability in China.

Finally, to conclude the first chapter, an in-depth look at the “*Pollution Haven*” Hypothesis and the Porter Effect will be carried out. The two hypotheses are much discussed when dealing with FDI in China, since, as mentioned above, in the early stages of economic development, usually, countries tend to relax their environmental regulation standards, accelerating the utilization of natural resources, and producing more pollution intensive products to attract more foreign capital inflows, so, it is interesting to discover the opinion of scholars about this topic.

² ZHAI, Chaoying, WANG, Leiqun, 疫情改变了我国 FDI 流入的影响因素吗? (Has the Epidemic Changed the Factors Affecting FDI Inflow in China?), Contemporary Financial Research, Issue 2, 2022.

In the second chapter, the topic of FDI will be discussed with particular reference to China. Specifically, a general overview of the impact that FDI usually has on the host country will be given first, in order to reach a good and general understanding of how it can affect the development of a country. It seemed essential to make a brief general aside in order to deeply understand the situation in China as well, since, over the years, it has been more or less possible to highlight what the positive and negative aspects of FDI on a country are, and the results are applicable to many realities. Continuing with the second chapter, it will be briefly outlined the history and development of FDI in China since the post-1978 period of economic opening and reform. Outlining such an aspect is interesting to allow the reader to understand the pace at which the country's economy has grown and the pace and importance of FDI over the years. Specifically, FDI first grew moderately, then exponentially, and in recent years has reached a stable growth pace.

The last section of the second chapter takes a fairly in-depth look at which entry modes investors prefer to approach the country and which industries they choose to invest in most. It is important to recognize the differences between the various industries and in which industry foreign investors concentrate their attention in China because, usually, depending on the industry, it is easier to understand what kind of relationship there is between FDI and sustainability. In this paragraph, mainly equity entry modes will be considered.

The part that considers the most attractive sectors for foreign investors can help in this research: by studying the sectors favored by investors, we can understand whether investments will be increasingly innovative and, therefore, sustainable, of course with all the exceptions.

With the third chapter there is the heart of the research. Mainly, the chapter will be divided into three sections: the first section will deal with the impact that FDI has on the Chinese economy, in particular, the focus will be on technology. Technology will be a recurring theme throughout the thesis because, as it will later be discovered, it is an essential means for achieving sustainability. Usually, high technology is synonymous with sustainability and innovation, which is why it is considered very important for research purposes. The technological spillover that FDI brings to China will be explored as it is an essential element to consider. Being one of the three elements that form sustainability, it is

interesting to analyze what kind of impact FDI has on Chinese economy in order to get to comprehend if, in addition to the economic growth that undoubtedly happened and continue happening, this growth is also sustainable from all points of view in order to increasingly develop a green economy country; Secondly, the impact of FDI on the environment will be analyzed. This point is particularly important as, especially in recent years, environmental protection has become more and more important and is given priority over many other aspects. With the advent of FDI, the environmental situation in China has been getting worse and worse. In recent years, however, the government has tried to put in place policies and regulations that also control this aspect in order not to further worsen its environmental situation. Seeing what effect FDI has on the environment in China also helps to understand how many problems in this regard could be avoided by discovering the relationship between FDI, the environment and FDI regulation; Thirdly, the last component of sustainability will be discussed: society. To conclude the picture of how FDI has affected the country and whether it can be a means of pursuing sustainability in China, the impact it has on society will be analyzed. In particular, the relationship between FDI and the employment and welfare of citizens will be addressed. It is believed that this is important because, when green economy is discussed, it is meant sustainable growth that also includes fair pay for workers in addition to an increasing level of societal wellbeing.

This last piece is needed to have the whole Chinese situation in mind and to understand whether, through the impact (positive or negative) that FDI has, it can be used as a tool to make the Country increasingly sustainable in all respects.

The fourth and final chapter will be a review of the regulations and policies adopted by the government. In particular, various topics will be touched upon: the general development of Chinese regulations and legislation regarding environmental protection and foreign investment law; list of investments that MOFCOM (Ministry of Commerce of the People's Republic of China) considers negative; Made in China 2025 (中国制造 2025); 13th and 14th five year plans (中华人民共和国国民经济和社会发展第十三/四个五年规划).

The Environment Protection Law was instrumental after the ever-increasing flow of FDI into the country as it had severely damaged the environmental situation, and over the

years it has been updated and amended to be increasingly effective. As for the FIL (Foreign Investment Law), it was promulgated in 2019. This law is of paramount importance because it emphasizes the government's ongoing commitment to protect its country from unfair or unprofitable investments that may not bring benefits. In particular, it discourages investments on the negative list drawn up by MOFCOM, which will be reported on in a section of this final chapter to analyze how investments within the country are filtered.

On the other hand, with regard to Made in China 2025 and 13th and 14th five-year plans, it was decided to take them into consideration in order to get to the bottom of whether sustainability is present in China's long-term plans and whether it goes hand in hand with the country's growth and development.

In conclusion, it can be said that the structure of this thesis aims to understand how and whether incoming FDI can help the sustainable development of the country.

The objective, given the importance of sustainable growth that benefits both the citizens and the general welfare of the country on all points of view, is precisely to outline a picture of the role that FDI plays in China and to understand whether, through an ongoing commitment and improvement of the government to move forward, one can, in the preferably near future, achieve goals and developments that change the country's fortunes for the better.

The research consists mainly of this, trying to put all the pieces together with the available information to try and catch the strengths and weaknesses of a system that has been formed by the force of great changes in its economic, environmental and social structure and by striving day by day trying to achieve the many goals it has set for itself, among them sustainability.

1. LITERATURE REVIEW AND RELATIONSHIP BETWEEN FOREIGN DIRECT INVESTMENT AND SUSTAINABILITY

Foreign Direct Investments (or FDI) represent the tool through which companies implement their internationalization process through an access to foreign markets. Indeed, FDI plays a fundamental role in the growth and development of a country.

Precisely, the International Monetary Fund define Foreign Direct Investment as: “*a category of international investment that reflects the objective of a resident in one economy (the direct investor) obtaining a lasting interest in an enterprise resident in another economy (the direct investment enterprise). The lasting interest implies the existence of a long-term relationship between the direct investor and the direct investment enterprise, and a significant degree of influence by the investor on the management of the enterprise*”³.

The existing literature regarding Foreign Direct Investment is truly exhaustive. Many scholars have, over the years, dealt with the topic and therefore, in this dissertation, will be made only a brief presentation of FDI to introduce the topic, as, the main focus that will be dealt with, is the correlation between FDI and sustainability.

In particular, here sustainability has to be intended as the same thing as sustainable development, defined by OECD as something that: “*seeks to balance the economic, environmental, and social dimensions of development in a long-term and global perspective*”⁴, so these three dimensions (economic, environmental and social) will be considered for the discussion.

Multinational Enterprises (MNEs) have different motivations to invest directly in markets abroad. These motives highlight what MNE wants to achieve in that specific location where they invest. MNEs may simultaneously invest for a multitude of reasons.

In general, the elements that are considered by Multinational Enterprises (MNEs) to decide for a Foreign Direct Investment vary greatly.

³ “A direct investment relationship is established when the direct investor has acquired 10 percent or more of the ordinary shares or voting power of an enterprise abroad.”

Patterson N, *et al.*, *Foreign Direct Investment, Trends, Data Availability, Concepts, and Recording Practices*, International Monetary Fund, 2004.

⁴ Organization for Economic Co-operation and Development, <https://www.oecd.org/> (last consultation on: 09/06/2022)

Blonigen (2005) indicates four determinants for FDI: Exchange Rate movements, Taxes, Institutions, Trade protection and Trade effect.

In a previous study conducted in 1997, Blonigen posits that there is a correlation between Exchange rates and FDI, stating that “*exchange rate movements may affect acquisition FDI because acquisitions involve firm-specific assets which can generate returns in currencies other than that used for purchase*”⁵.

As far as taxes are concerned, the issue is a little more complex: on the one hand, high taxation might discourage investment into a country, especially since an MNE might have to pay taxes both in the parent country and in the host country in two different ways and for different reasons; on the other hand, some FDI might not be tax-sensitive since, the profit generated by the affiliate in the host country might be reinvested in the country itself without being subject to taxation in the parent country and, conversely, a profit generated and reinvested in the parent country might not be subject to foreign taxation⁶.

Institutions are an important FDI determinant for a MNE for various reason. As Blonigen paper suggests: poor institutions (and/or corruption) bring poor infrastructure and increases the cost of doing business so companies are less attracted to the location, moreover, poor legal protection of assets increases the possibility of expropriation of a company's assets, discouraging FDI⁷.

Regarding Trade protection, it can be said briefly that “*higher trade protection should make firms more likely to substitute affiliate production for exports to avoid the costs of trade production*”⁸; while, concerning Trade effect it can be said that recently, MNEs are moving from export to FDI because, while with the export model there are lower fixed costs and higher variable costs, with a Foreign Direct Investment the opposite happens: variable costs, therefore transport and trade barriers are lower while the fixed costs are higher but, in fact, they remain fixed and are therefore are not subject to many conditions that cause the price fluctuation for exporting⁹.

⁵ BLONIGEN, Bruce A., *Firm-Specific Assets and the Link between Exchange Rates and Foreign Direct Investment*, The American Economic Review, vol. 87, no. 3, 1997.

⁶ BLONIGEN, Bruce A., *A Review of the Empirical Literature on FDI Determinants*, Atlantic Economic Journal, 2005.

⁷ *Ibidem*

⁸ *Ibidem*

⁹ *Ibidem*

Lu et al. (2021), analyzing stimulants of FDI, in particular applied to Chinese Outward Foreign Direct Investments and the industry level, state that “*both the motivation for FDI and the sector in which it takes place matter to understanding the determinants of investment flows¹⁰*”, and “*certain characteristics of industrial sectors, in both host and home countries, encourage different types of FDI¹¹*”, adding, among the other things, specifically that “*firms from Chinese industries with high domestic labor productivity were found to be more likely to engage in R&D-oriented OFDI, while more productive EU host country industries were more likely to attract FDI oriented towards sales and services, rather than manufacturing¹²*”. Their study added a piece of literature because, contrary to the theoretical models considered before, they took into great consideration the industry level of FDI and not only the firm level or the country level.

As far as theories are concerned, there are many concerning FDI, one of the most famous being Dunning's eclectic paradigm also called the OLI framework.

Just to make a quick mention, Dunning's eclectic paradigm is a pillar in the literature of FDI because summarize all the previous theories. It refers to the macroeconomic and institutional characteristics of countries, introducing different determinants of the foreign development of location-based firms.

The eclectic paradigm is a three elements-based framework that companies can follow when attempting to determine if it is beneficial to pursue Foreign Direct Investment.

The first element is the “*Ownership advantage*”. It comes from a possession of specific tangible or intangible assets or skills (technological know-how, commercial and managerial experience) that gives a major advantage over other enterprises.

The second element is the “*Location advantage*”: Location factors can be purely geographical, or it can refer to other factors like availability of cheaper raw materials, low cost skilled labor, lower rental & tax rates. Companies need to ask themselves if any of these location advantages present in the foreign market chosen.

The third and last element is “*Internalization advantage*”: the advantages can be traced back to transaction costs, as direct use allows better control of production by limiting

¹⁰ LV, Ping, CURRAN, Louise, SPIGARELLI, Francesca, BARBIERI, Elisa, *One country, many industries: Heterogeneity of Chinese OFDI motivations at meso level*, China Economic Review, Volume 69, 2021.

¹¹ *Ibidem*

¹² *Ibidem*

uncertainties, in return for a greater organizational and financial effort, and in the case of possible innovations it is easier to protect them from imitators.

The Eclectic paradigm is just one of the theories concerning FDI. As already mentioned above, the existing literature on this topic is extremely rich.

Below, it will be reviewed the existing International and Chinese literature on the relationship between FDI and sustainable development, that is the main focus of this dissertation.

1.1 International literature review on the relationship between FDI and sustainable development: what are the characteristics that FDI should present in order to promote sustainability?

In order to get into the main topic of the dissertation, it is essential to sort out the literature written about the existing relationship between FDI and sustainable development.

Firstly, in this paragraph will be reviewed the international literature to lay the foundations for the discussion, while, in the next paragraph, the Chinese literature on the subject will be dealt with in order to get to comprehend the situation more specifically.

There is an open debate over whether FDI inflows bring benefits or disadvantages for the host country's environment.

According to Narula (2012), Sustainable Investing argues that FDI should comply with high environment, social, and governance standards to achieve sustainability in the three fundamental pillars of development: economic, social, and environmental.

The paper guides to the achievement of sustainable development goal by looking at how FDI can be used to move towards sustainable growth. It also shows how crucial is, in the initial phase of FDI promotion, the encouragement by local governments of high environmental, social and corporate governance standards through the support of sustainable and responsible investments, that can lead to the long-term achievement of goals such as sustainable economic growth¹³. This research goes in particular into Indian details, but the premise of the study can be used as a starting point to analyze the phenomenon of sustainable FDI and take a brief look at the literature on the subject.

¹³ NARULA, Kapil, 'Sustainable Investing' via the FDI Route for Sustainable Development, *Procedia - Social and Behavioral Sciences*, Volume 37, 2012.

It is essential to define what a “sustainable FDI” is.

Sauvant and Mann (2017), in an article written for the International Centre for Trade and Sustainable Development, in which the aim was to list the characteristics of sustainable FDI, utter that it can be defined as: “*commercially viable investment that makes a maximum contribution to the economic, social and environmental development of host countries and takes place in the framework of fair governance mechanisms*¹⁴”.

The main concept behind sustainable FDI is that if a country cares about its sustainable development, it should control and choose sustainable Inward Foreign Direct Investment. It is really difficult to sort out all of the main characteristics that an FDI should have in order to be considered sustainable, but there are some elements that are fundamental.

As reported in the paper, some of the common sustainability characteristics are: Low carbon footprint; Labor rights; Workplace safety; Non-discrimination; Human rights; Transparency; Supply chain standards; Stakeholder engagement; Legal compliance¹⁵.

There are also a lot more elements reported in the paper, but it can be said that the main set of ingredients needed to invest in a sustainable way are the above-reported ones.

After this mention, it is considered important for the purposes of this dissertation to cite the OECD document "FDI Qualities Indicators 2022". The purpose of this document, issued for the first time in 2019, is “*to measure the sustainable development impacts of FDI in host countries*”¹⁶. In particular, the result of the research enlightened four different key insights:

1. “*30% of global investments in renewables were foreign investment in 2020. But in some countries considerable FDI goes into fossil fuel-based electricity generation*”¹⁷;
2. “*FDI most often flows into sectors which employ smaller shares of women but foreign firms tend to hire more women than comparable local firms*”¹⁸;

¹⁴ SAUVANT, Karl P., MANN, Howard, *Making FDI More Sustainable: Towards an Indicative List of FDI Sustainability Characteristics*, The Journal of World Investment & Trade, 2017.

¹⁵ *Ibidem*

¹⁶ *FDI Qualities Indicators 2022*, OECD, 2022.

¹⁷ *Ibidem*

¹⁸ *Ibidem*

3. *“Foreign firms are 60% more likely to invest in R&D and twice as likely to use new technologies but in developing countries FDI is concentrated in low-tech and low-productivity sectors”*¹⁹;
4. *“FDI creates around 180,000 direct jobs every month and contributes to higher living standards and upskilling but the benefits are often not equally shared across society”*²⁰.

The findings reported in the document are truly useful in order to study the topic of sustainable FDI because OECD managed to organize an every-year release document in which it is shown the updated impact of FDI in host countries.

In the document can be found a list of factors that can help institutions to attract sustainable Foreign Direct investment because the role of institutions is fundamental in the process of enhancement of sustainable development. Some of the suggestions are: to provide coherent strategic direction on sustainable investment and ensure effective implementation; to ensure that regulations encourage positive impacts of investment on sustainable development; to prioritize financial and technical support that addresses market failures and helps build capacities; to address information failures and administrative barriers that discourage sustainable investment; to strengthen the role of development co-operation to mobilize sustainable investment²¹.

On the footsteps of Narula (2012), cited at the beginning of this paragraph, analyzing the international literature that deals with the topic of FDI in correlation with sustainability understood as social, environmental and economic, it is considered interesting to present the study carried out in 2020 examining African countries, which, however, as reported by the authors, can be useful as a base for analyzing all developing countries.

The study highlights that the presence of foreign investors in a developing country can influence positively the achievement of Sustainable Development Goals.

In particular, it was found that *“FDI has a positive impact on developing countries in areas such as basic infrastructure, clean water, sanitation, and renewable energy”*²², but, at the same time, *“these investments may have some adverse consequences regarding*

¹⁹ *Ibidem*

²⁰ *Ibidem*

²¹ *Ibidem*

²² AUST, Viktoria, MORAIS, Ana Isabel, PINTO, Inês, *How does foreign direct investment contribute to Sustainable Development Goals? Evidence from African countries*, Journal of Cleaner Production, Volume 245, 2020.

*climate actions, in fact, the relationship between FDI and the probability of achieving SDG13 (Climate action) is negative*²³.

Generally, with sustainable development we mean the combination of various things, as already mentioned above, but, in the majority of cases, the environmental sustainability is taken into greater account because, nowadays, environmental monitoring is a controversial subject. It is indeed recognized that the environment is suffering consequently to many factors, so, many scholars decide to center their studies particularly on environmental sustainability, to see what kind of repercussions can FDI present and if they are beneficial or detrimental to the environment.

In a study conducted in 2021, scholars Adeel-Farooq et al. state that “*when it comes to the effects of FDI inflows on the environmental performance of a country, the environmental standards in the home country matter more than the ones in the host Country*”²⁴, they assert that who is more susceptible to environmental problems due to polluting FDI, is not endangered by the movement of FDI itself, they are rather related to the regulations and compliances in the home country, that is where the investment comes from.

The outcome of their study suggests that the countries’ governments should implement and design efficient and effective environmental policies in order not to let Foreign Direct Investments influence their sustainability standards, the study adds that “*such policies can help these countries to move closer to achieving sustainable development goals by ensuring sustainable economic development through efficient utilization of environmental capital and the use of energy-efficient technologies*”²⁵.

It is clear that, from the literature reported above, there are a lot of scholars studying and seeking to understand through econometric models and research how the foreign direct investment sector may or may not influence and in which way (positive or negative) a country's prosperity. The focus of this thesis, however, as previously reported, will be particularly situated on what effect inward foreign investment has on China, so the next section will review the Chinese literature on the relationship between FDI and sustainability.

²³ *Ibidem*

²⁴ ADEEL-FAROOQ, R. M., et al., *Improving the environment begins at home: Revisiting the links between FDI and environment*, Energy, Volume 215, 2021.

²⁵ *Ibidem*

1.2 Chinese literature review on the relationship between FDI and sustainable development

Regarding the Chinese literature concerning the correlation between FDI and sustainability in general, most scholars focus mainly on environmental sustainability.

In order to solve the serious problem of the ecological environment affecting China since the economic reform in 1978, China must rely on technological advances and management innovations to reduce its dependence on fossil energy and reduce pollutant emissions in order to achieve sustainable development.

Scholars findings on whether FDI promotes or hinders the development of China's green economy vary greatly. Different research methods and different research subjects have been used to reach different conclusions: some argue that FDI has contributed to the growth of the green economy, while others state that FDI hinder the development of China's green economy bringing a negative result.

Scholars Li Wenhong and Cao Wan Lin, in a study conducted in 2020, pointed out that FDI can promote the efficiency of green innovation by bringing in advanced technology and financial support for research and development, while environmental regulations will guide FDI in a more rational manner, thus fully supporting the efficiency of green innovation²⁶.

At the same time, Scholars Li Guanglong and Fan Xianxian (2019) find that FDI has an inhibitory effect on China's total green factor productivity, and this inhibitory effect is more pronounced in China's central and western regions. They state that FDI has a significant inhibitory effect on the country's green total factor productivity, which verifies the "pollution haven" hypothesis, which has certain regional heterogeneity, while the inhibitory effect of FDI on green total factor productivity in the central and western inland regions is more obvious. Even if the interaction between trade opening and FDI and the level of physical capital and human capital are conducive to the improvement of green total factor productivity, indicating that the benign mechanism of trade opening and FDI is started, the current infrastructure construction presents problems of resource waste and

²⁶ LI, Wenhong, CAO, Wan Lin, *FDI、环境规制与区域绿色创新效率* (FDI, Environmental Regulation and Regional Green Innovation Efficiency), Statistics and Decision journal Publisher, 2020.

environmental pollution, which, in the end, have an inhibitory effect on green total factor productivity²⁷.

The remaining academicians assert that there is a wide variation in the impact of different categories of FDI on the development of green economy. Research led in 2018, brought to the conclusion that only FDI with the domestic market as the main target would promote the development of China's regional green economy, and thus regions must classify FDI when introducing FDI and reduce the introduction of those FDI with the main purpose of export²⁸.

According to the 2020 study of the above-mentioned scholars Li Wenhong and Cao Wan Lin, in a study conducted in the same year by scholars of Jiangsu University (Zhenjiang, China), that analyzed the impact of FDI on sustainable development in China using a regression model, the outcome of the research turned out to be almost the same: foreign investors in China use ultra-modern and green technologies in the production processes²⁹. This also supports the fact that the Chinese government is slowing down the growth rate and shifting its focus to environmental protection, spending around 10 per cent of its GDP per year on solving environmental pollution problems³⁰.

To achieve sustainable development, it is necessary for China to strengthen environmental protection measures, reducing the disproportionate demand and consumption of resources that end up causing environmental pollution.

As the paper suggest, the central government, through provincial governments, should control and ensure that foreign investors comply with environmental regulations and punishments for non-compliance³¹.

Generally, there are no separate environmental standards for foreign investment, but foreign investors' environmental behavior must abide by Chinese environmental laws and regulations and meet the environmental standards.

²⁷ LI, Guanglong, FAN, Xianxian, *贸易开放、外商直接投资与绿色全要素生产率* (Trade openness, foreign direct investment and green total factor productivity), China Academic Journal Electronic Publishing House, 2019.

²⁸ XUE, Huifang, WANG, Guoxia, *外资驱动绿色经济发展的机制与对* (Mechanisms and implications of foreign investment in driving green economy development), China Academic Journal Electronic Publishing House, 2019.

²⁹ AYAMBA, Emmanuel C., et al., *The impact of foreign direct investment on sustainable development in China*, Environmental Science and Pollution Research, 2020.

³⁰ *ibidem*

³¹ *Ibidem*

Moving on, FDI, according to a significant number of academics, have no significant correlation with environmental pollution, but, according to Kui Liu and Boqiang Lin (2019), “*there is a significant spatial correlation among environmental pollution of each province, thus, it is particularly important to strengthen the cooperation of pollution governance among provinces*³²”. According to them, strengthen the cooperation among provinces can help improving control on green development and environmental pollution, and, despite, the government is investing money in order to improve this aspect, the commitment must be even deeper because of two main reasons: “*on one hand, it can control existing pollutant emissions while curbing pollutant growth; on the other hand, it can encourage the development and application of relevant clean production technologies, improve the efficiency, and then solve environmental problems from the source*³³”.

The idea is therefore widespread by the majority of scholars, after years of studies on the subject, that FDI may not necessarily be an obstacle to the green development of a country, but, as has been reported above, in some cases, they bring new sophisticated technologies that can contribute to the economic development of the country without damaging the environment.

The papers examined above treated about the correlation between Inward Foreign Direct Investments (foreign firms that decide to invest in China) and sustainable development, but, it is important to specify that, in China, heavy industry accounts for a large proportion of the industrial structure, consuming a large amount of energy and causing a large amount of pollutant emissions, so, pollution is still an important matter for the country’s wellbeing and the control of the environment should always be guaranteed by the government.

1.2.1 The “pollution haven” hypothesis and the Porter Effect

The above mentioned “pollution haven” hypothesis deserves an explanation for the purposes of this dissertation. This hypothesis argues that “*firms will seek to avoid the cost*

³²LIU, Kui, LIN, Boqiang, *Research on influencing factors of environmental pollution in China: A spatial econometric analysis*, Journal of Cleaner Production, Volume 206, Page 363, 2019.

³³ *Ibidem*

*of stringent environmental regulations (and high energy prices) by locating production in countries where environmental norms are laxer*³⁴.

It is essential to say that the “pollution haven” hypothesis, also called “pollution halo” effect, may or may not occur in relation to the change in the country's regulations regarding pollution and sustainability; for example, the result of a study conducted in the early 2000s can be different from the result of a study conducted nowadays because the regulations changed and the government is enhancing its efforts day by day, investing more and more in order to make more and more improvements to China’s environmental quality.

In an article published on the OECD website, Garsous and Kozluk (2017), citing other scholars that previously studied the topic, argue that countries with lax environmental regulations “*can gain an absolute competitiveness advantage because of lower costs of production, increasing total exports, growth and investment or a comparative advantage in pollution intensive industries*”. In all cases, pollution haven effects should be primarily observed in trade patterns, but firms in the more stringent country also have an incentive to invest in the “pollution haven” countries³⁵.

Their studies sustain the pollution haven hypothesis even though the effect appears to be quantitatively small. To demonstrate the theory, they assume that only a very high carbon tax would have a remarkable effect on Foreign Direct Investments.

Another study on the “pollution haven” effect conducted in 2009, found that Foreign Direct Investments in highly polluting industries funded by Hong Kong, Macau and Taiwan are attracted to weak environmental standards. In contrast, non-ethnic Chinese FDI are not significantly attracted to weak standards, regardless of the pollution intensity of the industry sector because “*richer countries have higher environmental standards, which have induced innovation and production of environment-friendly technology so that FDI from these countries often employs newer, cleaner technology even in locations*

³⁴ GARSOUS, Grégoire, KOZLUK, Tomasz, "*Foreign Direct Investment and The Pollution Haven Hypothesis: Evidence from Listed Firms*", OECD Economics Department Working Papers, No. 1379, OECD Publishing, Paris, 2017, <https://doi.org/10.1787/1e8c0031-en> (last consultation on: 02/06/2022)

³⁵ *Ibidem*

where standards are relatively weak”³⁶ while, in contrast, “entrepreneurs in poorer countries with lower standards typically use older, less “green” technologies and may import second-hand machinery”³⁷. These findings are consistent with the behavior of pollution paradise, but not by investors from high-income countries and only in highly polluting sectors.

Jianxia Yu (2019), asserts that the implementation of environmental policy inhibits FDI and verifies the existence of the “pollution haven” effect in China for a long time. While enhancing openness and actively introducing foreign capital, Chinese government must maintain the bottom line of environmental regulations to ensure the quality of FDI³⁸, that is to say that FDI is negatively influenced by the strict environmental regulations.

Contrary to the "pollution haven" hypothesis, there is the Porter effect that asserts that “firms can benefit from environmental regulations. It argues that well-designed environmental regulations stimulate innovation which, by enhancing productivity, increases firms’ private benefits. As a consequence, environmental regulations would not only be good for society, but they would also be good for firms”³⁹.

Jaffe and Palmer (1997), state that Porter effect can comprehend at least three hypotheses: “narrow”, “weak” and “strong”. The “narrow” version of the hypothesis is that “certain types that environmental regulation stimulate innovation”, the “weak” version says that “regulation will stimulate certain kinds of innovation”, and then the “strong” hypothesis says that “environmental regulation can lead to an increase in firm-, industry-, or country-level competitiveness”⁴⁰.

As mentioned above, supporting the Porter effect, Haisheng et al. (2005) stated that there was no certain impact of trade and FDI on the environment. They found that FDI had a positive impact on economic growth and help to invent new technologies to reduce

³⁶ DEAN, Judith, et al., *Are foreign investors attracted to weak environmental regulations? Evaluating the evidence from China*, Journal of Development Economics, 2009, citing Bhagwati, J., 2004.

³⁷ *Ibidem*

³⁸ YU, Jianxia, *Re-examination of "Pollution Haven" or "Pollution Halo" Effect on Foreign Direct Investment —Evidence from “Two Control Zones” Policy in China*, Advances in Economics, Business and Management Research, volume 106, 2019.

³⁹ AMBEC, Stefan, BARLA, Philippe, *A theoretical foundation of the Porter hypothesis*, Economics Letters, Volume 75, Issue 3, 2002.

⁴⁰ JAFFE, Adam B., PALMER, Karen, *Environmental Regulation and Innovation: A Panel Data Study*, The Review of Economics and Statistics, vol. 79, no. 4, 1997.

pollution⁴¹. This, following their studies, demonstrates that China is not a “pollution haven” of the advanced countries, but it was found that China’s huge economy and cheap labor are the main determinants of FDI inflows rather than lax environment regulation⁴². Recently, Zhao et al. (2022), posit that in China is validated the “*strong*” version of Porter hypothesis because environmental taxes, according to their studies that consider the panel data of A-share listed enterprises in heavy polluting industries in China from 2011 to 2019, bring innovation and economic benefits to innovative firms⁴³. They add that “*the effect on the quality of innovation is heterogeneous across tax region*”, specifically “*a high environmental tax rate is more conducive to the improvement of innovation quality, and the intermediary effect of innovation quality is significant only in high tax rate regions*”⁴⁴.

There are various studies that demonstrate both hypothesis: some scholars confirm that China, having a slightly looser regulation than other countries in terms of pollution and environmental protection, is a magnet for all those large companies and firms that want to reduce production costs paying less attention to green development, on the other hand there are scholars who instead state that investments bring a more advanced and therefore less polluting technology and that companies in rich countries instead favor stricter environmental rules because promote innovation, confirming the Porter hypothesis. It is true that Chinese government is working on ameliorate the regulation and the efforts for the development of the green economy is getting more and more persistent, but, are these elements sufficiently adequate for the improvement of the country or are they still too mild?

To sum up, it can be stated that a large number of scholars have empirically tested this hypothesis, but they have not reached a consistent conclusion. Some scholars believe that China's environmental regulation is weak, the cost of pollution is low, and developed countries have transferred polluting industries to China, aggravating China's

⁴¹ HAISHENG, Yang, et al., *The impact on environmental kuznets curve by trade and foreign direct investment in China*, Chinese Journal of Population Resources and Environment, 2005.

⁴² CHEN, Honglei, ZOU, Xiaorong, CHEN, Qiufeng, *Export-oriented Economy & Environmental Pollution in China: the Empirical Study by Simultaneous Equation Model*, Energy Procedia, vol. 5, 2011.

⁴³ ZHAO, Aiwu, et al., *Environmental taxes, technology innovation quality and firm performance in China—A test of effects based on the Porter hypothesis*, Economic Analysis and Policy, Volume 74, 2022.

⁴⁴ *Ibidem*

environmental pollution and they found that FDI is neither conducive to the progress of green technology nor effectively improve the efficiency of green technology. However, some scholars believe that the "pollution paradise" hypothesis does not occur in China⁴⁵, especially in the last decade where the importance attributed to the environment is more and more consistent.

2. INWARD FOREIGN DIRECT INVESTMENT IN CHINA

After the introduction of the topic and the literature review about the relationship between FDI and sustainability, it is considered important to indicate the role that FDI plays in China and the development it have had since the Economic Opening Reform, moreover, it is considered important for the purposes of this thesis, to briefly outline the history and development of Foreign Direct Investment in China and to present the entry modes employed by the firms in order to approach the Country.

2.1 General impact of FDI on the host country and development of FDI in China

In order to understand better the development and role that FDI have and had in China, it is considered important to shortly outline the major impacts that FDI has on a country in general. As already mentioned in the first chapter of this dissertation, the literature and material concerning FDI is conspicuous, for this reason, it will be only made a brief presentation of the topic to lay the foundation of the analysis that will follow.

In the past few decades, Foreign Direct Investment by global multinational corporations has grown rapidly: according to statistics, in the 1980s, the average annual growth rate of Foreign Direct Investment exceeded 20%, and in the 1990s, the average annual growth

⁴⁵ HU, Xueping, XU, Pei, *FDI 质量特征对中国经济高质量发展的影响研究* (The Impact of Quality of FDI on the High-quality Economic Development), International Trade Issues, Issue 10, 2020.

rate even reached 40%. From 2001 to 2007, the average annual growth rate remained at around 15%⁴⁶.

In recent years, although all countries have been affected by financial crises of varying degrees, Foreign Direct Investment has maintained its vigorous vitality, indeed, many countries view FDI as a booster of economic growth and strive to promote FDI. Nevertheless, FDI can be a double-edged sword for both host and home countries, bringing benefits as well as negative impacts.

According to Liao (2014), the effects of FDI on a host country are various: firstly, Foreign Direct Investment can provide a large amount of funds for the development of the host country's industries, thereby promoting the growth of the host country's GDP.

Foreign Direct Investment helps to solve the problem of capital shortage in developing countries, and to a certain extent promotes the formation of industrial capital in developing countries; Secondly, foreign direct investment will promote the technological innovation of local enterprises in the host country, thereby enhancing their market competitiveness. Relatively speaking, as the main body of Foreign Direct Investment, multinational companies have more sufficient capital, advanced production technology and rich management experience. Therefore, when multinational companies enter the domestic market of the host country, they are bound to intensify market competition, thus prompting local enterprises to invest more funds in production process innovation and product research and development; Thirdly, foreign direct investment helps to adjust and optimize the industrial structure of the host country. Usually, the host country government will choose to introduce different kinds of foreign direct investment according to its basic national conditions and needs; Fourthly, the spillover of advanced technology and scientific management methods of multinational corporations can promote the economic development of host countries; Fifthly, for the host country, foreign direct investment will bring more employment opportunities for local residents.

As for the negative effects that FDI can have on a host country, according to the paper, they can be classified as follows: firstly, the introduction of a large amount of foreign direct investment will lead to the monopoly of the host country's market, thereby affecting the development of the host country's industries. Multinational companies often choose

⁴⁶ LIAO, Run Dong, *Influence of Foreign Direct Investment on Host and Home Nations' Economy*, Zhejiang Institute of Mechanical & Electrical engineering, Hangzhou, 2014.

to produce standardized products in host countries to reduce their production costs and expand their market share. Compared with the products of local enterprises, the standardized products of multinational companies have more obvious relative advantages, therefore, in the long-term competition, multinational companies are likely to merge or eliminate local enterprises, and then monopolize the market; Secondly, for most host countries, foreign direct investment will cause certain environmental pollution, especially manufacturing. Under normal circumstances, multinational companies will relocate their high-consumption, high-polluting manufacturing plants out of the country. In the production process of these factories, the massive exploitation of the natural resources of the host country has not only led to the depletion of natural resources, but also caused serious pollution. At the same time, the discharge of industrial waste gas and wastewater from multinational companies will also accelerate the deterioration of the host country's environment; Thirdly, foreign direct investment will increase the income gap between the employees of the host country's enterprises, thereby increasing the social gap between the rich and the poor. When a multinational company prepares to establish a subsidiary in a host country, it needs a large number of skilled and experienced workers; Fourthly, with the increase of foreign capital introduced in the host country, its economy will be increasingly affected and restricted by foreign economies. With the change of foreign investment, the Consumer Price Index of the host country will inevitably also change, and the economic inflation rate of the host country and the foreign economy are closely related⁴⁷.

In general, it can be stated that FDI has a positive impact on the host country the majority of the times. As Lehnert et al (2013) affirm “*the more FDI inflow in the host economy, the more positive is the influence on the host country's life expectancy, education, and standard of living*”⁴⁸.

As for China, it is considered appropriate to start from the beginning to see the development of Foreign Direct Investment in the Country and the role it has and has had in its development. Reform and opening up has been the most crucial period in China's historic shift in economic development. Over the past forty years, China has been

⁴⁷ *Ibidem*

⁴⁸ Lehnert, Kevin, et al, *FDI Inflow and Human Development: Analysis of FDI's Impact on Host Countries' Social Welfare and Infrastructure*, Thunderbird International Business Review, 2013.

adjusting its approach to economic development in the midst of structural changes. In the process of gradual reform, the strictly planned system has gradually been replaced by the market, and enterprises have been given greater autonomy to optimize the allocation of resources through the market in order to achieve high economic growth. During this period, the national economy was in a period of adjustment and development: on the one hand, the original economic structure was adjusted, while on the other hand, the market system continued to maintain a very high economic growth rate along the lines of the rough and tumble model. The most influential factor in China's economic growth and growth pattern during this period was undoubtedly institutional innovation, with market-based reforms mobilizing the motivation of different sectors of the workforce and becoming the main driver of economic growth during this period⁴⁹.

Indeed, considering the institutional innovation, following the foreign opening policy implemented by China in 1978, measures and tax provisions were enacted at local level to attract foreign investment and let foreign companies willing to invest in the country. This action by Deng Xiaoping demonstrates China's willingness to move forward on the issue of Foreign Direct Investment and thus the implementation of regulations to provide quotas for foreign companies in China. Among the many initiatives, in addition to the promulgation of a law concerning Joint Ventures with Sino-foreign capital, the four Special Economic Zones (SEZ) were established in 1980 to help, through a free trade regime, the introduction and attraction of new investments in the country.

There was one main reason for the initial investment flow: the low labor costs compared to other countries, as the Chinese economy was still at an early stage of development.

Another important year for FDI is 1986: up to this time, the Chinese government only allowed investments, but, from this time onwards, especially investments with the aim of exporting, were actually encouraged as they were seen as a mean to improve the country's economy.

Another important element was the Catalog for Guidance of Foreign Investment Industries, which guaranteed foreign investors favorable taxation and regulation.

⁴⁹ LIN, Minshu, *新中国 60 年经济增长方式的历史演变及其展望*(The Historical Evolution of the Economic Growth Pattern in New China in the Past 60 Years and Its Prospects), Xiamen University Institutional Repository, 2009.

Although investors were subject to one clause: they were requested to transfer their technology to local companies in exchange of access to the national market.

After a slow start, investments in China increased dramatically since the 1990s.

Approximately 60 per cent of the FDI inflow was directed to high-tech and export-oriented sectors, especially in the coastal provinces, but strategies aimed at the local market were also starting to develop.

In 1993, China became the largest receiver of FDI among developing countries and the second largest in the world after the United States. Although FDI remains tightly controlled by state policy, the approval of some small projects is granted to provincial and municipal governments.

In an attempt to maintain a favorable environment for business commercial activities related to foreign relations, government policies begin to focus on the relationship between foreign capital and local industry. During the peak period between 1992 and 1993 Deng Xiaoping's imperative was to accelerate economic reform and develop the export industry, therefore, foreign investors are granted the right to sell with greater freedom in the local Chinese market. They are offered special investment incentives in certain preferential sectors and new sectors were opened up for foreign investment (finance, tourism, shipping, resource development).

What caused a massive flow of investment into China between 1992 and the early 2000s was the change in the direction of Chinese policy led by Deng Xiaoping during his famous trip to South China in 1992, during which he stated that the continuation and deepening of economic reforms was vital to the legitimacy of the party and its ability to maintain popular support. The growth of annual FDI usage went from \$4 billion in 1991 to more than \$45 billion during the peak period between 1997 and 1998.

Two of the most significant features of the Chinese foreign investment regulatory regime based on attracting and managing vertical foreign investment are, on the one hand, the presence of a large number of incentives and, on the other hand, many entry restrictions. Because vertical foreign investment is very cost-sensitive, China has introduced incentives based on tax incentives in order to compete for foreign investment with other developing economies where labor is cheap. Prior to 2008, foreign-invested enterprises were exempt from income tax for two years from the year of profitability, while domestic enterprises incurred 33% of the income tax, and for the following three years the income

tax was reduced by half. Prior to 2001, for export-oriented or technologically advanced foreign-invested enterprises, foreign investors could enjoy tax incentives for more years in addition to the above benefits.

Along with the incentives, China has imposed access restrictions on certain industries (as it will be dealt with in the last chapter of this thesis). In general, foreign investment is banned in some areas related to national security and traditional crafts, and restrictions on foreign investment access are imposed in areas where the technical strength of domestic capital is weak and needs to be supported. In some fields, the implementation of policies to encourage foreign investment is accompanied by restrictions on entry, such as not allowing foreign ownership. These restrictions are common in developing countries and there is a theoretical economic basis for imposing them in the early stages of economic development⁵⁰.

In 2008, the implementation of the Enterprise Income Tax Law of the People's Republic of China gradually reduced the income tax rate for both domestic and foreign investors. An important context for the transformation of the foreign investment management system is the important change in the motivation for the inflow of foreign investment into China. After a considerable period of development, the wage level of labor in China, especially in the coastal areas of China has changed: rising wages have reduced the incentive for cost-oriented foreign capital inflows, but rising wages mean that people's income levels have risen and that the size of the Chinese market has expanded.

The source of China's fundamental competitive advantage is increasingly shifting from cheap labor to a large and fast-growing domestic market.

Over the years, was also established, seeing that FDI was increasingly present in China, the entry supervision of foreign investment, that implemented a registration system together with an industrial and commercial registration system of domestic enterprises. For the entry of foreign capital in large-scale and key industries, the supervision departments, when necessary, conduct a competition law and anti-monopoly review.

The focus of supervision shifted from the access period to the post-access period, and the main purpose of the post-access period supervision was thought to ensure fair competition.

⁵⁰ CUI, Fan, WU, Songbo, 《中华人民共和国外商投资法》与外商投资管理新体制的建设 (The Foreign Investment Law of the People's Republic of China and the Construction of a New System for Foreign Investment Management), International Trade Issues No. 4, 2019.

After this, China began to establish a foreign capital management system, that could give full play to the role of foreign capital in promoting the Country's economy, and at the same time restrict the negative effects of foreign capital that may use unfair competition and restrictive business practices to lead to market monopoly, so as to truly make the introduction of foreign capital work.

At the 2019 China International Fair for Trade in Services, President Xi Jinping emphasized that the Country "*will expand market access for foreign capital in a wider area and actively create a first-class business environment*"⁵¹.

In 2019, China's actual utilization of foreign capital reached 941.5 billion yuan, making it the second largest country for foreign capital inflows for three consecutive years. With the continuous construction and formation of the new pattern of the Country's comprehensive opening up, Foreign Direct Investment is bound to play a more important role in the country's economic development.

However, it should also be noticed that the scale and structure of Foreign Direct Investment flowing into the country have undergone great changes. An obvious feature is that foreign direct investment is currently showing a steady growth trend, with an average growth rate of 5.85% in the past five years, and the coexistence of high growth and high volatility before the financial crisis is no longer present.

As will also be tackled later in this dissertation, there are many initiatives and laws enacted to control the flow of FDI into the Country. It is important to underline that, for the purposes of this thesis, we will evaluate not so much the economic benefit that FDI have brought to China, but more if the large flow of foreign capital investments can be an element that, through the improvement of laws and regulations and long-term goals of China, can raise the country's sustainability to a more advanced level.

2.2 What are the entry modes employed in China and is there any distinction among the different industries?

Just to briefly introduce and lay the groundwork for the discussion of the next section, which will be the focal point of the entire dissertation, in this paragraph will be discussed

⁵¹ LIAO, Bao Zhi, *The Present Situation, Problems and Countermeasures of FDI in China*, Shanghai Academy of Social Sciences, 2021.

the entry modes used by MNEs in China and, above all, it will be taken stock of which industries are most interested in FDI in the country. It is important to know the differences between the various industries and in which industry foreign investors concentrate their attention in China; usually, depending on the industry, it is easier to understand what kind of relationship there is between FDI and sustainability.

In this dissertation, merely to quickly touch on the subject without going into too much detail, only equity entry modes will be mentioned because are the investments that mostly affect the economic, environmental and social situation of a country. Non-equity entry modes are not so relevant because, often, are adopted at an early stage to see whether or not it is appropriate to enter a new market and do not require a great deal of commitment for the MNE nor do they involve a high level of risk. In other words, when we talk about non-equity entry modes, we are referring to export (direct or indirect) and licensing and franchising, solutions that can also be undertaken in the short term and that do not involve a large capital outlay. Through these entry modes, however, firms do not learn from the experience of operating in foreign markets.

Usually, after an initial approach to the market through a non-equity entry mode, companies switch to an equity entry mode if they deem it appropriate. Equity entry modes can be of two types: shared ownership, i.e., involving several companies in which each has partial ownership (e.g. international joint ventures) or full ownership in which companies set up subsidiaries through acquisitions (acquisition of a company that already exists) or greenfield investments (completely new business unit in a foreign market).

A large body of literature shows that these two equity entry modes have significantly different impacts on the host economy. Therefore, it is of great practical significance to clarify the factors affecting the choice of FDI entry mode in order to understand what FDI is the most beneficial to the economic development of a country (in this context with particular reference to China).

This aspect was mainly analyzed using the transaction costs theory (Hennart, 1991 and 2010) according to which the different FDI entry modes have different transaction costs

and FDI investors weigh the transaction costs of these two entry modes and they choose the entry mode with the lowest transaction costs to enter the host market⁵².

However, the transaction cost theory perspective focuses only on minimizing specific types of transaction costs and neglects the value creation capabilities of different entry modes⁵³, that is the value of the real options that accompany the different entry modes.

Brouthers et al. (2008) identify three scenarios in which real option values arise.

The first is the "different opportunity cost associated with different entry times", that is, since the market context is fluid, the foreign investor's choice of moment of entry will influence the value that can be obtained from the investment. The foreign investor cannot focus only on minimizing transaction costs and looking for a positive profit.

The second is "future growth brought about by investment under high uncertainty": transaction cost theory predicts the expected future growth of investment projects in advance, and generally assumes stable growth of investment projects. Such ex-ante estimates will be highly unreliable if there is high uncertainty in the host country market;

The last is "the flexibility of foreign investors' entry strategy", that is, enterprises can form enterprise-specific resources through early investment. These resources constitute strategic real options, allowing enterprises to reallocate their assets according to the situation when future uncertainties arise⁵⁴.

Like Brouthers et al. (2008) mentioned in their paper: since transaction cost theory rivet only on cost minimization instead of value creation and is unable to explain some essential elements, many scholars have tried to adopt real options theory to explain the choice of FDI entry mode.

Gilroy & Lukas (2006) constructed a two-stage real option model to study the market entry mode of FDI. They obtained a threshold that is determined by the associated entry costs, uncertainty and the location characteristics. The model is characterized by taking into account the future development after foreign investment (like the first summed up by Brothers et al., 2008). There are two situations that will generate real options. Their research shows that the higher the volatility of the host country's market demand, the

⁵² HENNART, Jean-François, *Transaction Cost Theory and International Business*, Journal of Retailing, Volume 86, Issue 3, 2010.

⁵³ ZAJAC, Edward, OLSEN, Cyrus, *From transaction cost to transactional value analysis: implications for the study of interorganizational strategies*, Journal of Management Studies, 1993.

⁵⁴ BROUTHERS, Keith, et al., *Real Options, International Entry Mode Choice and Performance*, Journal of Management Studies, 2008.

shorter the construction period of greenfield investment projects, and the more attractive the host country's culture is to greenfield investment, the more foreign investors tend to adopt greenfield investment entry mode⁵⁵.

In a very interesting study conducted by Li and Li (2013), in which a three-stage real options model is built to comprehensively analyze the decision-making process and the factors that influence the way foreign investors approach to a country, it emerges that foreign investors tend to choose a greenfield investment entry mode to enter the host country market in countries or regions with rapid construction, rapid economic growth and fluctuating market demand, while foreign investors tend to choose the cross-border Mergers and Acquisitions entry modes to enter the host country market in countries or regions with slow construction, slow economic growth and stable market demand. The study also showed that the host country's political orientations for foreign investment directly and significantly influence the choice of how FDI enters, and foreign investors tend to enter the host country's market in the manner encouraged by the host government⁵⁶. This interesting study can help us to go into more detail and analyze the most used entry modes by foreign investors in China and why. In their paper, they assert that it should be in the interest of a country's government to monitor and choose which type of investment is best for its development.

They state that “*Chinese government should pay close attention to the selection of how FDI enters the Country's market, explore what factors determine the distribution structure of the current way FDI enters the Country, and how to carry out macro control to guide FDI to enter in the Chinese market in the way that is most beneficial to the general interests of the country*”⁵⁷.

Through their research, they found that the most popular kind of investment in China is greenfield investment.

In support of their analysis, they assert that the reason for the predominance of greenfield investments in China is that, after China's opening reform, the economy has been growing

⁵⁵ GILROY, Bernard M., LUKAS, Elmar, *The choice between greenfield investment and cross-border acquisition: A real option approach*, The Quarterly Review of Economics and Finance, Volume 46, Issue 3, 2006.

⁵⁶ LI, Shanmin, LI, Chang, *跨国并购还是绿地投资? FDI 进入模式选择的影响因素研究* (Cross-border M&A or Greenfield Investment: What Affect Choices between the Two FDI Entry Modes?), China Academic Journals Electronic Publishing House, 2013.

⁵⁷ *Ibidem*

rapidly for a long time and the pace of construction has been fast, so foreign investors tend to enter through greenfield investments. The subjective aspect is that the Chinese government, in order to introduce advanced technology and management experience into foreign enterprises, protect the country's economic and industrial security, and prevent the takeover of famous brands, has adopted a policy of controlling foreign investment in mergers and acquisitions, encouraging or even forcing foreign investors to enter the Chinese market through greenfield investment⁵⁸.

In their enlightening paper, they also declare that the government's differing preferences for the two entry modes will gradually become an important factor affecting the distribution of FDI entry patterns in China. In light of the global trend of cross-border mergers and acquisitions becoming one of the main tools of FDI and the reality that the Chinese economy will not be able to sustain high growth rates in the long run, the Chinese government needs to adjust its policy on foreign investments, moving from the previous focus on greenfield investments to one that takes into account both greenfield investments and cross-border mergers and acquisitions, in order to continue to attract FDI into the Chinese market⁵⁹.

To present a more complete picture of the situation regarding sustainability, it is also very interesting to note what are the entry modes adopted by Chinese companies in developed countries.

In a very recent paper from 2022, it is underlined that Chinese companies, when it comes to Greenfield Investments, need (as already reported at the beginning of the paragraph) deeper consideration and need to understand if this kind of investment is the right choice or if, instead, it is better to opt for an Acquisition, for example⁶⁰.

On the other hand, China could also bring high technology through its investments and, of course, when Chinese companies invest in developed countries, they have stringent rules regarding sustainability, whether it is environmental, economic or in terms of human resources.

⁵⁸ *Ibidem*

⁵⁹ *Ibidem*

⁶⁰ BILAL, Ahmed, et al., *Internationalization of emerging economies: Empirical investigation of cross-border mergers & acquisitions and greenfield investment by Chinese firms*, Journal of Innovation & Knowledge, Volume 7, Issue 3, 2022.

Xiao et al. (2021), studying the impact of greenfield investments and Mergers and Acquisitions of Chinese companies in outward FDI, argue that, generally, Greenfield Investments are the most suitable for pursuing sustainability, while Mergers and Acquisitions are better for ensuring that an exchange of know-how takes place between companies from various countries, thus increasing technological innovation⁶¹. It could be argued that the two dimensions are actually correlated since, as already repeated many times in this dissertation, technology is a very important mean for achieving and approaching sustainability.

In fact, Chinese companies invest in so many countries that it is extremely difficult to delineate whether or not their behavior is sustainable in all the territories they approach, which is why in this dissertation the situation in China is examined in more depth. Certainly, it can be argued that each country's regulation on sustainability is crucial for foreign companies to improve the country's situation and make positive changes instead of the other way around.

In general, the fact that Chinese Government is more inclined to accept Greenfield Investments on its territory is very important for the achievement of sustainability, because, with Mergers and Acquisitions, no improvements would be made to the companies already present on the territory because, being acquired, they do not enhance to the point of making a big change and a substantial improvement in sustainability, which is not the case with Greenfield Investments, because, the foreign company, along with its know-how, also brings its own technologies, which, in recent years, are increasingly innovative and allow other Chinese companies to gain additional experience and thus improve more and more, thus enhancing the concept of sustainability, which is developed and elevated through this technology.

After talking about entry modes and explaining which are the most used in China (equity entry modes), it is considered interesting for the purpose of the research to discuss which are the industries in which firms decide to invest the most through FDI in China.

This topic is considered important because the distribution of FDI in different industries has a direct impact on the development of the regional green economy.

⁶¹ XIAO, Chunhuan, et al., *OFDI Entry Modes and Firms' Innovation: Evidence from Chinese A-Share Listed Firms*, Sustainability 13, no. 14, 2021.

Before 1993, the primary industry (mining, agriculture and petroleum) was the most attracting one to foreign investors, but during the years the percentage of inward investments directed to the primary sector dropped, leaving more and more space to the secondary (food, textile, paper, chemicals,...) and tertiary sector (construction, transport, communication,...)⁶². In particular: “by 1991, the second sector absorbed more than half of Chinese FDI, and the share of FDI accumulation in this sector almost doubled between 1988-93. In addition, the investment focus has begun to move from the textile processing, chemical, and mechanical and electronics industries to technically advanced enterprises”⁶³.

Moving forward, speaking about the tertiary sector, they affirm that “the Chinese services sector is another area foreign investors are making commitments with increasing interest. During the ten years 1988-93, the services sector's FDI accumulation rose from 32 percent of total FDI stock in China to more than 47 percent, the level maintained by the developed economies in the late 1980s”⁶⁴.

To corroborate the above, Shaukat and Wei (2005) state that “in terms of sectoral distribution, foreign investment in China has concentrated on secondary industries, but tertiary industries have become the latest destination for China-bound FDI”⁶⁵.

Industry	Number of New FIEs	Share (%)	Realized FDI Value (US\$100 million)	Share (%)
Total	38578	100	1493.4	100
Primary Industry	405	1.1	4.2	0.3
Secondary Industry	4607	11.9	365.5	24.5
Tertiary Industry	33566	87.0	1123.7	75.2

Source: MOFCOM FDI Statistics.

In the table above, created by MOFCOM⁶⁶ (Ministry of Commerce) in 2021 in a document reporting the statistical bulletin of FDI in China, it can be noticed that, in 2020, the tertiary industry accounted for the 75.2% of the total FDI. This number clearly

⁶² BROADMAN, Harry, SUN, Xiaolun, *The distribution of Foreign Direct Investment in China*, World Bank publications, 1997.

⁶³ *Ibidem*

⁶⁴ *Ibidem*

⁶⁵ SHAUKAT, Ali, WEI, Guo, *Determinants of FDI in China*, Journal of Global Business and Technology, 2005.

⁶⁶ Ministry of Commerce, People's Republic of China.

expresses that the tertiary sector importance is growing more and more in the Country, and it has always grown exponentially over the years, developing and attracting more and more the attention of foreign investors. Growth in the tertiary sector could be a great advantage for China when it comes not only to sustainability, but also in making the service sectors better manage their resources and be more competitive.

As previously cited scholars Xue and Wang determined: FDI in the secondary industry, represented by heavy chemical industry, consumes a lot of energy and emits a high level of pollutants, which will have a negative impact on local green economic development, while, when FDI is concentrated in the tertiary industry, which consumes less energy and emits less pollutants, it will have a positive impact on the development of the local green economy ⁶⁷.

The development of the tertiary sector in terms of investment has been completely contradictory to the forecasts made after the economic reform in China.

Initially, all inward FDI that foreign investors made in China were more focused on the manufacturing sector, i.e. the secondary sector. In support of this, Pei (2001) asserts that *“the scale and proportion of foreign investment is rather small in primary and tertiary industries because most inflow of foreign investment has been concentrated in secondary industry, especially the industrial sector”*⁶⁸. According to data from the period from 1978 to 2001, the development of foreign investment in the tertiary sector was really slow, enough to make China far behind compared to other countries.

There is a reason behind this exponential increase. The reason is that, against fierce competition from the world's leading economies in the services sector, China has given high priority to the development and expansion of this sector, taking it as a pillar of the transformation and strengthening of China's industrial structure. They realized, after lagging behind many countries (as mentioned above) that the world's leading economies are improving their global competitiveness in the service sector, and that the service economy, therefore, has become increasingly important in the modern economic structure as a key to the new economic development model.

⁶⁷ XUE, Huifang, WANG, Guoxia, *外资驱动绿色经济发展的机制与对* (Mechanisms and implications of foreign investment in driving green economy development), China Academic Journal Electronic Publishing House, 2019.

⁶⁸ PEI, Changhong, *The Changing Trend of FDI Patterns in China*, The Chinese Economy, 2001.

As mentioned above, the tertiary sector could benefit China greatly. As studied by Sun et al. (2021), the technological change that has developed in recent years in the tertiary sector, i.e., the service sector, is the primary reason for the improvement in technological efficiency over the years. Through their model, they can affirm that environmental regulation (which will be dealt with in the second chapter of this dissertation) is a driving factor in promoting energy efficiency⁶⁹.

Vice versa, the decline in energy efficiency is the consequence of the decline in technical efficiency.

So, after China joined the WTO in 2001, Chinese economy is gradually in line with the world, and the degree of opening to the outside world is also constantly increasing.

Having the goal of increasing fierce competition among multinational companies in China and rapidly develop the national economy, the Country gradually relaxed the restrictions on FDI.

As can be understood from the above analysis, FDI could truly bring benefits to the various industries of the country. The technological development that they could bring would not benefit so much the primary sector, but more the secondary and above all the tertiary, that is the services industry.

FDI, in these years, facilitated the transformation of China's industrial structure to a higher level, i.e. capital-intensive and technology-based industries, and has narrowed the gap between China's industrial structure and the overall international trend. In terms of internal structure of the tertiary industry, China's new industries were underdeveloped in many areas such as information, finance and insurance, so, through the inflow of foreign capital, the Country could fill this gap and promote the development of the tertiary sector⁷⁰.

⁶⁹ SUN, Peng, et al., *Energy efficiency comparison amongst service industry in Chinese provinces from the perspective of heterogeneous resource endowment: Analysis using undesirable super efficiency SBM-ML model*, Journal of cleaner production, 2021.

⁷⁰ HOU, Qing, *外商直接投资对我国产业结构的影响* (The Influence of Foreign Direct Investment on China's Industrial Structure), China Academic Journal Electronic Publishing House, 2020.

3. CAN FDI BECOME A TOOL FOR FOSTERING SUSTAINABILITY IN CHINA?

Obviously, the advent of the inward Foreign Direct Investment in China leads to some consequences. The purpose of this dissertation is to analyze if this consequence brings positive externalities or negative externalities to the Country.

After the literature review (International and Chinese) and the review of the adopted entry modes in China together with the analysis of the most attractive sectors for foreign investors, in this paragraph the real subject of this dissertation will be addressed: can FDI be a tool to promote sustainability in China?

As already mentioned at the beginning of this chapter, sustainability must be intended as the balance of three elements: economic, social and environmental.

More generally, reference can be made to the sustainable economy. This type of economy requires that the development of society has to be pursued respecting the concept of sustainability from, precisely, a social, economic and environmental point of view.

Therefore, in this chapter, the effects of FDI on these three dimensions will be analyzed to see whether they bring benefits or not.

3.1 FDI impact on Economy

After its economic reform and consequent opening in 1978, China, considering a 30 years period, has successfully remodeled its economy from a backward, agriculture-oriented economy to a modern and industrialized economy. In this conversion process, FDI played a substantial role in renovating China's economy and remarkably expanding its industrial outputs and trade.

Assuming that, according to the traditional neoclassical growth theory (Solow model), long-term economic growth can only be achieved through technological advancement and labor force growth, someone might opine that FDI can only influence short-term production growth of the economy; However, various studies have shown that FDI has a major boost to long-term economic growth role. Indeed, FDI, do not only bring capital, technology, and products, but also bring advanced management experience that,

consequently, plays a huge role in promoting the host country's economic development and technological progress.

Briefly summarizing the paper of Yang (2017), it can be stated that the contribution of FDI to China's economic growth is mainly reflected in three dimensions: capital formation, foreign trade and technological spillover. Regarding the first dimension, FDI can bring physical capital to the host country and make up for the lack of domestic funds; Considering the second dimension, it can be uttered that, as the carrier of FDI, multinational companies often have natural international marketing channels and overseas markets. In this way they can create more trade opportunities for the host country and help the host country quickly integrate into the global value chain; Finally, discussing the third dimension, the paper reports that FDI is a complex of capital, management and technology, so its advanced production technology and management experience will diffuse and spillover to local firms, thereby increasing the productivity of local firms⁷¹.

The introduction and use of FDI in the Chinese economy, can be roughly divided into four phases: a start phase (1978-1982), a growth phase (1983-1991), an improvement phase (1992-2001) and a constant development phase (2001 to present)⁷².

Following these phases, the development and growth of FDI in the country passed from a critical period of transition to a high-speed growth stage, leading to the current high-quality development stage. Coming to a phase of stabilization and equilibrium, it is important for an open economy also considering the quality of FDI. This element will consequently inevitably affect the quality of the Country economic development.

The quality of FDI is relatively difficult to quantify than the quantity of FDI because the data is more difficult to obtain, and the definition of the elements to consider is really complex. However, in the context of globalization and the transition of China's economy from high-speed development to high-quality development, it is particularly important to explore the causal relationship between different FDI quality characteristics and China's high-quality economic development from the perspective of FDI quality.

⁷¹ YANG, Hong-li, *FDI 影响中国经济增长的内在机制* (The Impacts of FDI on China's Economic Growth), Journal of Shanghai University of International Business and Economics, 2017.

⁷² XIN, Hongyan, et al., *FDI 对中国经济增长影响的实证分析* (Empirical Analysis of Impact of FDI on China's Economic Growth), Journal of Beihua University, 2016.

Hu and Xu (2020), in order to examine the FDI quality characteristic related to the Chinese high-quality economic development, analyzed in their paper the theory that FDI quality affects high-quality economic development mechanism.

Their study rotates around the point that, by learning advanced technologies from foreign investors, local enterprises can improve their own total factor productivity. In addition, foreign investor's enterprises with high technical level also have relatively high technical requirements for intermediate products, which will help to force local enterprises to carry out R&D innovation, thereby driving the entire industrial chain to carry out a new round of technological revolution. Given that, it is intrinsic the evolution of innovation and development because the stronger the profitability of FDI, the stronger the economic strength of the enterprise and the sufficient funds to purchase high-tech products for scientific and technological innovation.

Also the managerial element is considered, they assert that foreign enterprises with strong management capabilities have a solid management system that is conducive to improving the labor productivity of employees and bringing more profits to the enterprise.

Moreover, it is beneficial to learn from those companies the managerial skills in order to improve the personal ones and bring more experience into the host country market.

Another point covered is coordinated development. If high-quality FDI is introduced in relatively underdeveloped areas, the high profitability of FDI will not only benefit the enterprise itself, but also increase local government tax revenue. It is natural that FDI's industry-oriented policies and regional-oriented policies can accelerate the flow of factors between industries and regions, and balance economic development between regions. The increase in government tax revenue, can improve the level of local infrastructure, which in turn will attract high-quality FDI, further promote local economic development, form a virtuous circle, and shorten the development gap between regions.

The free flow of production factors will eventually make the returns of factors in various regions tend to be equal, and further narrow the gap between the rich and the poor in different regions. The technology spillover and management experience of FDI will generate positive externalities, which will help drive the rapid development of local

enterprise groups, thereby narrowing the gap with developed regions and achieving coordinated regional development⁷³.

From their paper, it can be noticed that high-quality economic development is inseparable from traditional economic growth because the most advanced provinces are eastern provinces (in particular Beijing and Guangdong). These economically developed areas have various high-quality elements, including human capital and sound infrastructure.

Human capital is the carrier of technological innovation while infrastructure investment further enhances the current situation by promoting industrial structural transformation and improving labor productivity. Technological innovation, especially green innovation, is conducive to improving environmental protection.

There are still a lot of provinces, municipalities, and autonomous regions that do not present the same features that eastern provinces present: this shows that the gap between provinces is large, and the high-quality development of China's economy is not formed homogeneously.

There is another side of the coin to consider though: on the one hand, the general industries in the economically developed areas are also relatively developed, and industrial production activities have caused serious environmental pollution; on the other hand, the economically developed areas have the strength to invest a lot of money in pollution control.

In particular, according to their study, the top five provinces are Beijing, Guangdong, Jiangsu, Zhejiang and Shanghai. These five Provinces are highly economically developed, and the concentration of high-quality talents makes these regions have a high level of innovation and development. Related to this, it can be said that the profitability of FDI significantly promotes high-quality economic development.

FDI with strong profitability has more surplus capital to invest in technological innovation, improving in this way labor productivity, and carrying out industrial optimization.

Especially in the critical period of economic transformation from high-speed growth to high-quality development, promote green technology innovation is fundamental. Green

⁷³ HU, Xueping, XU, Pei, *FDI 质量特征对中国经济高质量发展的影响研究* (The Impact of Quality of FDI on the High-quality Economic Development), *International Trade Issues*, Issue 10, 2020.

technology innovation can improve the efficiency of environmental resources and maintain the healthy and sustainable economic development. Capital is for the purpose of making profits, and FDI with strong profitability can solve the problem of funding gaps of the host country and, at the same time, the strong profitability of FDI can increase the revenue of local governments.

The government will invest more funds in local infrastructure construction, which will help the transformation of industrial structure and the improvement of labor productivity. Reiterating the aforementioned concept regarding management, it is reported in the paper that the impact of FDI management capabilities on high-quality economic development is significantly positive in order to balance the situation among China's industrial areas. Indeed, the stronger the management ability, the stronger the ability to effectively allocate resources. The effective allocation of resources in different regions can help to promote the coordinated development of regions and improve the overall social and economic welfare.

It is a fact, after the analysis of the literature carried out in the first pages of this dissertation, that technology plays a key role in the development of the sustainable economy. The model shown in the paper demonstrate that the level of FDI technology significantly promote high-quality economic development. Since technological innovation requires a large amount of capital investment in the early stage and the capital return cycle is very long, the risk for a company is relatively high but, by introducing and imitating the advanced technology of foreign-funded enterprises, the host country can effectively improve its own technological level. Indeed, the cost of such technological improvement is far less than the cost of technological innovation by the host country itself, and it can be realized in a short period of time. Technological progress is the driving force and the core of competitiveness of high-quality economic development and is the key to realizing green economic development; The premise of sustainable development, low-carbon economy and green economy all depend on the realization of technological innovation⁷⁴.

At the same time, some scholars argue that the steady growth of FDI actually inhibits the development of the sustainable economy.

⁷⁴ *Ibidem*

Jahanger (2021), asserts that the technical level of FDI in the Country does not significantly affect the development of the high-quality economy. The fact, looking at this research, is that “*on the one hand, exporting countries are generally reluctant to transfer their core technologies to the host country, and on the other, it is mainly because the host country has a low level of human capital and cannot absorb foreign technology*”⁷⁵.

What the research is about is that, according to the scholar, companies do not bring very advanced technology to developing countries as they have no interest in transferring it. There is a lot of discussion on this topic, even if, lately, as already reported above, most scholars emphasize that the role of technology is essential and, in reality, foreign companies that establish themselves on Chinese territory, also given the changes regulations on FDI and sustainability are increasingly inclined to approach the country with advanced technologies and therefore are actually a positive growth factor of all the elements mentioned above.

About the impact that FDI has on the economy of a country, it is really important to make a distinction: it is important to consider the economic growth of a country, but at the same time it is extremely important to consider the quality of its economic development (already analyzed above). It is a general truth that FDI benefits economic development. FDI influences the Chinese economy in several ways.

The introduction of a large number of FDI not only directly promoted the growth of China’s economy, but also had a comprehensive impact on its export trade, employment, balance of payments and other aspects of the national economy. How to understand the impact of foreign investment scientifically and objectively on economy and formulate corresponding investment policies has become an important research topic. Moreover, as already cited, economic opening has an increasingly significant impact on the Country's economic development. China's entry into the WTO not only vigorously promoted commodity trade, but also further accelerated the flow of factors between China and other countries. At the same time, there is a profound internal correlation between international commodity trade and international capital flows.

However, it can be argued that FDI also has a negative effect on economic growth.

⁷⁵ JAHANGER, Atif, *Influence of FDI characteristics on high-quality development of China’s economy*, Environmental Science and Pollution Research, 2021.

Considering the positive elements, Zhang (2006) asserts that the largest contribution of FDI to economic growth relates to the significant expansion of manufacturing exports. Moving on, due to tariffs and taxes imposed on foreign investors, government revenue increased⁷⁶. In addition, income taxes on foreign investors shared just over 20% of the total tax revenue in China, moreover, setting up foreign subsidiaries in China helps to reduce the unemployment rate.

The negative effects, according to Zhang (2006) are that FDI could actually reduce domestic savings and investment. Therefore, FDI could decrease the GDP growth rate in China.

FDI can also augment the growing inequalities among the provinces. There is evidence that FDI is unevenly distributed due to special economic zones (SEZs). Therefore, this, results in provincial income inequalities. Lastly, multinationals seem to benefit from the high returns on investment in China. Therefore, some of them take advantage of higher transfer prices and transfer their profits to their countries. Meanwhile, this is a disaster for the Chinese economy.

The brief citation of these positive and negative aspects of FDI on economy, can help to understand how to promote high quality economic development in China. As already uttered before, the economic growth of a country it is surely extremely important, but it is more urgent the need of developing a sustainable pace of economic growth.

A very enlightening paper by Hu (2016), suggest some aspects that Chinese government should consider in order to let the Country's economy grow in an effective way:

1. Actively introduce foreign investment, improve the legal system for the introduction of foreign investment in China and move closer to international management.
2. Raise the threshold for the introduction of foreign investment and encourage the introduction of investment in high-tech projects and advanced technology.
3. Give policy preferences to foreign investors who invest in the central and western parts of China to drive their economic development and not let them grow heterogeneously.

⁷⁶ ZHANG, Kevin Honglin, *The Role of FDI in China's Export Performance*, Illinois state University, 2006.

4. Protect local enterprises and improve laws and regulations while introducing foreign direct investment⁷⁷.

To sum up, the introduction of foreign capital has both advantages and disadvantages, but, in general, it has promoted the growth of China's economy. Therefore, it is necessary to actively introduce foreign capital in the future to make it play a greater role in future economic development, but always having the Government controlling it.

3.1.1 FDI Technology Spillover Effect in China

In most of the papers consulted for this research, it emerges that technology, if advanced, changes in a positive way the fate of the host country.

Thus, to better understand whether or not technology is important for the development of the Chinese green development, it is considered necessary to deepen this aspect in this paragraph since, it is essential to comprehend, given the aforementioned debate, which are the substantial changes that technology can bring.

The positive effect that an advanced technology could bring to the host country of investments is repeated several times in this dissertation, a brief study will then be made, analyzing the papers and the consequent models of the scholars, on what kind of consequences the technology brings to the host country, in this case China.

The focus on technology is placed at this point of the dissertation as, after the discussion on the impact that FDI have on the economy, for this aspect to develop in a sustainable way, this element is fundamental.

A considerable research literature argues that FDI plays a beneficial role in promoting the host country's economy. For the host country as a developing country in particular, an important reason why they are willing to attract multinational companies to invest in their country is to utilize the market competition effect, the employment flow effect, etc., with the aim to improve the production efficiency of local companies, thus improving the industrial and technological level of the country and promoting the industrialization process of the country through the industrial chain of multinational companies.

⁷⁷ HU, Xin, *外国直接投资对中国经济增长的效应分析* (Analysis of the Effect of Foreign Direct Investment on China's Economic Growth), China Academic Journal Electronic Publishing House, 2016.

Although Foreign Direct Investment has a positive spillover effect on the local economic development of the host country, direct investment by MNEs can also have a negative externality on local firms in the host country, e.g., the loss of skilled labor.

This leads to a decline in the production capacity of local firms and intensified competition leads to a decline in the market share of host country firms. In most cases, the positive spillover effect of foreign direct investment can offset the negative impact on local firms, but empirical studies on developing countries and countries with economies in transition have shown different results⁷⁸.

Multinational corporations own and produce most of the world's key technologies and are the largest implementers of Research and Development and innovation products in the world.

Through the implementation of various preferential means and policies, developing countries hope to attract more and more MNEs to make direct investments in order to diffuse the key technologies of MNEs to local firms in the process of transferring them to subsidiaries⁷⁹. Technology diffusion can be achieved through various channels, such as international trade, international cooperation and international technical assistance and technology transfer, but for developing countries serving as host countries, Foreign Direct Investment is undoubtedly the most attractive way.

This is because the host country can obtain technology transfers that may be difficult to obtain by other means⁸⁰.

The model reported in the paper written by Xie (2006), in which are studied the provinces related with technology spillover, can be used to draw out the situation about technology spillover in China, given that the situation is changed but the model reports data that are partly still true nowadays.

Through the model it was found that Foreign Direct Investment has a clear effect of promoting the improvement of technical efficiency in China's provinces. It can be seen that for every 1 percentage point increase in the stock of foreign capital, the technical

⁷⁸ XIE, Jianguo, *Technical Spillovers of Foreign Direct Investment in China: A Study Based on Provinces Panel Data*, China Economic Quarterly, Vol. 5, No. 4, 2006.

⁷⁹ BLOMSTRÖM, Magnus, KOKKO, Ari, *The impact of foreign investment on host countries: a review of the empirical evidence*, Policy Research Working Paper 1745, 1996.

⁸⁰ CAVES, Richard E., *Spillovers from Multinationals in Developing Countries: the Mechanisms at Work*, William Davidson Institute Working Papers Series 247, William Davidson Institute at the University of Michigan, 1999.

efficiency of Chinese provinces increased (the effect of technical inefficiency decreased) by 11.4 percentage points⁸¹ and for every 1 percentage point increase in the foreign capital stock, the technical efficiency of Chinese provinces increased by 8.3 percentage points, so, the contribution of foreign capital stock to the efficiency of Chinese provinces was 11.4 percentage points.

It was found that regardless of whether based on stock or flow indicators, Foreign Direct Investment has a significant impact on improving the efficiency of production technology in Chinese provinces and regions⁸².

The changes in the investment composition of Chinese provinces caused by the increase in Foreign Direct Investment have significantly improved the level of technical efficiency of Chinese provinces. The regression results shown in the paper, demonstrated that for every 1 percentage point increase in the share of foreign direct investment in GDP, the production efficiency of Chinese provinces increased by 4.3 percentage points; and for every 1 percentage point increase in the share of Foreign Direct Investment in total investment, the production efficiency of Chinese provinces increased by 8.4 percentage points⁸³.

In the paper, the author reached two main concluding point⁸⁴:

1. Compared to domestic firms, the same firms with foreign participation have higher production efficiency.

It can be noticed that both the use of foreign capital in the year and the increase in the proportion of foreign capital to GDP in that year significantly improved the technical efficiency of Chinese provinces. However, as analyzed above, whether greenfield or M&A investment, there is a certain lag in capacity building and technology transfer even in domestic investment by multinationals. When technology diffusion occurs to domestic enterprises, the process of such diffusion will take longer. If the use of foreign capital in the year and the increase in the ratio of foreign capital to GDP have significantly improved the technical efficiency of Chinese provinces, the only possible reason for this result is that the

⁸¹ XIE, Jianguo, *Technical Spillovers of Foreign Direct Investment in China: A Study Based on Provinces Panel Data*, China Economic Quarterly, Vol. 5, No. 4, 2006.

⁸² *Ibidem*

⁸³ *Ibidem*

⁸⁴ *Ibidem*

production efficiency of foreign-invested enterprises is higher than that of domestic enterprises and total foreign direct investment. The increase in the ratio leads to an incremental improvement in the overall production efficiency of the enterprise, which manifests itself as an increase in regional production efficiency in macro terms.

Based on this research, it can be assumed that, overall, the production efficiency of foreign-funded enterprises is higher than that of domestic enterprises.

2. Foreign direct investment has clear spillover effects on the production efficiency of Chinese provinces. From the results of model, it can be seen that for every 1 percentage point increase in the ratio of foreign capital to total capital, the technical efficiency of Chinese provincial production increased by 8.4 percentage points and the efficiency improvement in Chinese provinces and regions and the contribution of the technology spillover effect to the technical efficiency improvement in Chinese provinces and regions is 4.1 percentage points.

Of course, this conclusion is based on the premise that the Chinese capital-output ratio remains unchanged during the sample period. If the Chinese capital-output ratio increases during the study sample period, the technological spillover effect of foreign-funded firms will be larger than the research results.

This research itself implicitly assumed that the spillover effect of FDI was limited within the industry and ignored the impact of FDI on technological spillovers outside the industry and the regional industry cluster. In fact, FDI affects the entire region through demonstration effects, labor transfer effects, production linkage effects and competition effects, not only within a particular industry.

In particular, the research was based on Provinces Panel Data, indeed, it is interesting to report the outcome of the study.

It was uttered that there are significant differences in the technical efficiency of the FDI enterprises themselves in East, Central and West China: “*the eastern FDI firms are the most technically efficient, the central FDI firms are the second most technically efficient, and the western FDI firms are the least technically efficient*”⁸⁵. From the model, it can be noticed that for every 1 percentage point increase in the amount of actual FDI utilised in

⁸⁵ *Ibidem*

the year, the technical efficiency of the western provinces as the reference group is significantly different.

The regional spillover from FDI depends on the history of foreign investment and its share in the local economy, usually, the longer the history of foreign investment, the larger the share in the local economy, the easier it is for local firms to learn and imitate advanced technology and management experience from foreign firms, and the longer the history of foreign investment, the easier it is to promote changes in the local institutional and legal environment, which is conducive to improving the productivity of local firms. In addition to these institutional and historical reasons, it was argued that the lack of learning capacity of local enterprises in western provinces was undoubtedly one of the most important factors affecting the technological spillover of FDI, instead, there was a significant positive impact of FDI firms on the improvement of technical efficiency in the eastern provinces.

The paper shows that during the sample period 1994-2003, the central region also received significant technology spillovers from opening up and foreign capital inflows. The difference between the central provinces and the eastern provinces indicates that the central provinces have a higher technology diffusion rate than the eastern provinces. This difference suggests that, after a longer period of development, enterprises in the central provinces have gradually adapted to the competitive situation and local enterprises have started to learn advanced production technology and advanced management experience from foreign-funded enterprises in the region, and the demonstration effect of foreign-funded enterprises has started to emerge.

To sum up, it can be enunciated that, according to the results of the paper, FDI significantly improves the technical efficiency of production in Chinese provinces, moreover, the technological spillover effect of FDI shows regional differences and FDI significantly improved the technical efficiency of eastern and central provinces but did not have a noticeable impact on the technical efficiency of western provinces.

It is proved that there are regional differences in the level of technical efficiency of foreign direct investment enterprises, among which the eastern region has the highest level of efficiency, and the central region has the second highest level of efficiency.

Since the total amount of foreign direct investment, technical efficiency and technology spillover to local enterprises are significantly unbalanced in regional distribution, foreign direct investment may increase economic disparity between regions in China.

The technological spillovers of Foreign Direct Investment in the host country depended on the technology absorption capacity of local enterprises, which, in turn depended on human capital investment, technological differences, financial markets and degree of development. Therefore, for China's provinces, it is essential continuing to implement preferential policies to attract investments and expand openness, increase investment in human capital education and training, formulate various policies to promote R&D spending by local enterprises, improve the autonomy of R&D capabilities, and cultivate and develop an effective financial market in order to solve the disparity of technology spillovers and promote regional economic growth equally⁸⁶.

3.2 FDI impact on environment

The second dimension of sustainability that will be discussed in this dissertation is environment. Probably, this dimension is, nowadays, the most discussed because environmental protection is one of the most important topics. In particular, in this research, it will be done an analysis on the impact that Foreign Direct Investment has on environment, principally the Chinese environment. The focus will be the relationship between environmental pollution and regulation, with some references at the above-mentioned economic growth. Government environmental regulation will be only briefly cited in this paragraph because, the analysis of the complete regulation will be made in the next chapter, but now, it is especially important to understand the link between regulation and the impact of FDI in China.

Generally considering the topic, it can be said that the inflow of FDI has prompted the Chinese government to improve the level of environmental regulation, and strict environmental regulation has continuously raised the environmental threshold for foreign investment. FDI and environmental regulation jointly promote the improvement of regional green economic efficiency.

⁸⁶ *Ibidem*

When the environmental protection awareness of domestic residents is enhanced and the level of environmental regulation is improved, it will invisibly improve the prevention and control of enterprises.

It can be stated that the most fundamental determinant of foreign investment is the domestic institutional environment, which includes policies promulgated by governments and other formal and informal organizations or institutions, policies and requirements⁸⁷. As already mentioned in the paragraph about the literature review, in order to further promote economic growth, the government has issued a series of preferential policies to actively attract foreign investment. However, with the gradual expansion of the scale of foreign investment in China, some of the developed countries have transferred pollution-intensive industries to China, which has already been severely damaged (environmentally speaking). Doing this, the environment has deteriorated further.

In recent years, with the increasingly prominent environmental problems, domestic scholars have begun to pay attention to the impact of investment (FDI) on the environment. Among them, some scholars believe that FDI is harmful to the environment and will have a negative impact. However, some scholars hold different views.

They believe that the technological effects brought about by FDI will have positive effects on the environment. Some scholars found through research that, after the introduction of FDI, the economic regulation of the invested enterprises, the mold, industrial structure and production technology have been improved, and the improvement of production technology has brought to the local environment a positive impact.

It is worth noticing that the investment of foreign capital also brings many environmental problems that have been affected the sustainable development of the regional economy⁸⁸. According to Grossman and Krueger's research (1995)⁸⁹, the structural effect of FDI refers to the impact of the industrial composition and regional distribution of FDI on the environment of the country where the investment is located. The structural effect has both

⁸⁷ WANG, Zhu Jun, et al., *Influence of Two-way FDI on Green Economy Efficiency under the Background of Heterogeneous Environmental Regulation*, China Academic Journal Electronic Publishing House, 2020.

⁸⁸ YU, Ruicheng, *异质性 FDI 对我国自然环境的影响* (The impact of heterogeneous FDI on my country's natural environment), Shandong University, 2018.

⁸⁹ GROSSMAN, Gene M., KRUEGER, Alan B., *Economic growth and the environment*, The quarterly journal of economics, 1995.

positive and negative effects. Positive impact is when more and more investment flows to service business and high-tech industries, causing changes in industry structure, and this change in industry structure is generally beneficial to the environment and has a certain positive impact on it. The negative effects mainly refer to the "pollution halo" hypothesis previously cited.

Cao et al. (2015) assert that, generally, there are three major effects of FDI on the environment.

Citing Grossman and Krueger (1991), in their paper it can be read that Foreign Direct Investment has an impact on the host country's environment through the interaction of scale, structure and technology.

The first is scale effect: the scale effect refers to the environmental impact caused by the exaggerated production scale of the host country due to the introduction of foreign capital. On the one hand, the pressure on the environment will also increase due to the expansion of production scale. Under the condition that other factors remain unchanged, the environment of the host country will deteriorate; on the other hand, with the continuous development of the host country's economy and the increase of people's income, the corresponding social awareness of environmental protection will be enhanced accordingly. This may lead the government to increase investment in environmental governance, and also lead to increased willingness of residents to participate in environmental protection activities due to the increase in environmental awareness, thereby improving the environmental conditions of the host country.

The second is the technological effect. Always reporting Grossman and Krueger (1991) words, it is pointed out that Foreign Direct Investment is likely to improve its own production technology and produce technology spillover effects. The diffusion effect of this technology usually brings about the improvement of production efficiency, the increase of the utilization rate of natural resources, the optimization of industrial structure, the reduction of environmental pollution caused by unit output, and the improvement of the environmental condition of the host country. And multinational companies often have a lot of capital, advanced technology, cleaner production methods and production equipment compared to the host country's enterprises. Therefore, the technological effect of FDI is often a positive impact on the host country's environment.

The third is the structural effect. Structural effect refers to the impact of foreign inflows into industries in different regions of the host country, which has an impact on the environment of the host country. First of all, if FDI funds are too concentrated in a certain region or a few industries, it will increase the production scale of a certain region, thereby causing huge pressure on the environment of the region. Second, if foreign direct investment is mostly concentrated in pollution-intensive industries, it will expand the scale of pollution-intensive industries and deteriorate the environment of the host country⁹⁰.

The awareness of environmental protection in developed countries is becoming stronger and stronger, and the environmental standards are becoming more and more strict.

Therefore, the environmental protection costs of enterprises in these countries are getting higher and higher. Relatively speaking, the environmental protection standards of developing countries are lower, and enforcement is less stringent. In order to save environmental protection costs and maximize profits, enterprises in developed countries used to take advantage of this difference in standards and move polluting factories to developing countries.

In general, there are the following two categories of views: one view holds that FDI has a certain effect on the environment of developing countries. The positive effects of the synergy outweigh the negative effects. Some scholars believe that, to some extent, the two can cooperate with each other. In other words, the inflow of FDI has brought advanced technology and management experience to developing countries, improving the situation of the environment.

Another view is that FDI worsens the environment of developing countries.

Some scholars believe that there is an incompatibility between the "private interest" of FDI and the "public interest" of environmental protection because this "self-interest" determines that the choice for the investment will inevitably flow to areas with higher profits.

It is important, at this point, to draw out the history of FDI related to pollution and environment in China.

⁹⁰ CAO, Yaoyuan, et al., *FDI 对中国环境的影响* (The impact of FDI on China's environment), www.qikan.com.cn, 2015.

According to the Chinese Ministry of Environmental Protection, in 2008 the national emergency environmental incidents were generally on the rise, with 135 environmental emergencies directly handled by the Ministry of Environmental Protection, a 22.7% increase over the previous year including 12 major environmental incidents, an increase of 4 over the previous year.

Pollution increased, non-point source pollution increased, industrial and mining pollution became prominent, and drinking water safety had hidden dangers.

Zhang Lijun, Vice Minister of Environmental Protection, said: *“the current environmental situation facing China is still very serious”*.

First, the pollution of surface water is still serious; second, the water quality of the coastal waters in the country is generally slightly polluted; third, some cities are still heavily polluted; fourth, environmental problems in rural areas are becoming increasingly prominent⁹¹.

China's air pollution had seriously endangered people's health. Research shows that in China, a major determinant of chronic obstructive respiratory disease is air pollution. Air pollution causes huge economic damage, loss, restricting economic development, becoming one of the factors of people's dissatisfaction with society, and even affecting the social stability. At the same time, the level of air pollution in China also had a negative impact internationally, with Beijing listed as one of the most polluted cities by the World Health Organization.

China, according to Jin (2009), was one of the 13 water-poor countries in the world with very few per capita water resources, with a per capita water resource of more than 2,300 cubic meters, equivalent to 1/4 of the world's population, and even less in northern China. With severe water shortages, the pollution of water resources is serious. The main rivers are generally polluted by organic matter, and the Liaohe and Haihe rivers are the most seriously polluted.

According to reports, in 2004, among more than 600 cities in China, more than 400 cities had insufficient water supply. Due to the increase of urban population, industrial

⁹¹ JIN, Zhenzhu, *外商投资对中国环境污染的影响分析与对策* (Analysis and Countermeasures of the Impact of Foreign Investment on China's Environmental Pollution), Foreign Economic and Trade University, 2009.

wastewater discharge and excessive development of water resources, was stimmed that the marine environment and fresh water would have been affected⁹².

It was estimated that the economic loss caused by water pollution is about 30 billion yuan. China's water pollution is coming with two aspects: one is the industrial development exceeding the standard discharge of industrial wastewater, the other is the urbanization due to the collection of urban sewage discharge.

There is a serious lack of intermediate treatment facilities, and a large amount of domestic sewage directly enters the water body without treatment, causing environmental pollution. Although water has been reduced in recent years after treatment, urban domestic sewage has increased unabated, with more than 51% of ancient water pollution⁹³.

The 2008 China Environmental Status Bulletin shows that China's surface water pollution was still serious at that time.

As with everything, there are positive and negative aspects to consider, so it can be said that FDI brought along positive and negative effects in China.

In the paper, the author lists the positive and negative aspects that FDI has brought to China.

Firstly, it is conducive to the spillover effect of environmental protection technology and promotes the diffusion of environmental protection technology. Foreign enterprises, especially many multinational corporations committed to a global strategy, tend to use the exact same technology in each site as an important part of their competitive strategy. The production technology they use is not only based on the current management system, but also on the development of the future management system, so they focus on transforming existing technologies or introducing new environmental protection technologies to alleviate environmental pollution.

At the same time, the introduction of FDI has brought in advanced foreign environmental protection technology equipment and management experience, effectively making up for the lack of domestic environmental protection investment and training a group of talents. Some private entrepreneurs who have returned from studying in Europe and the United States to start their own businesses have actively accepted, learned and practiced the environmental protection behaviors of foreign enterprises, while actively carrying out

⁹² *Ibidem*

⁹³ *Ibidem*

ISO14001⁹⁴ certification, efforts are made to research and introduce clean production technology and promote the protection of environmental protection technology⁹⁵.

Secondly, it is conducive to the introduction of environmental protection industry investment and promote the development of China's environmental protection industry. Attracted by China's huge potential environmental protection market, foreign investment in the construction of environmental protection enterprises not only provides a source of funds and advanced technical equipment for China's environmental protection and governance, but also accelerates the structural adjustment and optimization of China's environmental protection industry and products, while satisfying the huge demand of China's environmental protection market and effectively controlling environmental pollution. The higher environmental awareness and advanced environmental management methods of foreign-invested enterprises have produced a positive learning and demonstration effect on the improvement of environmental protection awareness and environmental management level of Chinese partners. Under the circumstance that foreign enterprises are vigorously strengthening environmental protection measures, some domestic enterprises are also active in order to maintain their competitiveness by learning, constantly updating environmental protection facilities, improving environmental protection technology, improving management system, under the benign competition of enterprises. These actions have promoted the improvement of the environmental protection level of Chinese enterprises⁹⁶.

Third, it is conducive to the improvement of Chinese citizens' awareness to the concept of environmental protection. In developed countries, the awareness of environmental protection has long been deeply rooted in the hearts of the people.

Foreign companies, especially multinational companies that focus on the long-term development of the company, in order to maintain their reputation, provide a high-quality environmental image, reducing the risk of legal liability due to the occurrence of major environmental incidents.

⁹⁴ ISO 14001 is internationally recognized as the reference standard for EMS Environmental Management Systems and is applicable to organizations of all sizes and sectors.

The ISO 14001 standard provides a management structure for the integration of environmental management practices, pursuing environmental protection, pollution prevention, as well as the reduction of energy and resource consumption.

⁹⁵ *Ibidem*

⁹⁶ *Ibidem*

In their strategy, there are not only corresponding environmental commitments given to the outside world, but many companies also put them into practice. For example, many foreign enterprises are willing to take the ISO14001 certification of environmental management standards as an indicator of their business status and reputation: this is a proof, a passport, to enter the international market.

Among the certified companies in China, more than 2/3 are foreign-invested companies. The affiliated of the foreign companies are required to adopt the parent company standard when investing in the region and overseas. The higher environmental awareness of foreign-invested enterprises is conducive to improving the environmental protection of Chinese enterprises and residents.

The awareness of protecting the environment has brought a great influence, and gradually formed the management and consumption concept of "proud of protecting the environment and ashamed of polluting the environment"⁹⁷.

For what concerns the negative effects of FDI on environmental protection in China, in the paper are listed a few elements.

Although the paper was written in 2009, it can be stated that there are a lot of elements that are still true nowadays and make the Country one of the most polluted nations in the entire world.

Firstly, it directly destroys the ecological environment and damages the health of residents. On the one hand, the medium and low-end technical equipment and products introduced in FDI directly damage the local ecological environment and harm the health of residents. For example, a joint venture in Shenyang introduced a process that had been abandoned by the investing country, that is, using liquid to produce fluorescent lamps, resulting in a permanent concentration in the workshop air exceeding the standard and seriously damaging the health of production workers⁹⁸. On the other hand, due to the interest trend of poor cost and profit, under the influence of some environmental protection restrictions (such as restricting the production of input and output products with polluting characteristics), the domestic pollution-intensive industries have been eliminated and in marginal industries with high energy consumption and low added value,

⁹⁷ *Ibidem*

⁹⁸ *Ibidem*

many enterprises either stop the production of original polluting products, or concentrate their production in those countries or regions with looser environmental regulations.

FDI in China's eastern coastal areas is mainly concentrated in these industries or parts of these industries. The paper takes the IT industry as an example, and states that the Yangtze River Delta region is an important manufacturing and export base for IT products in the world. For example, in 2003, yet the production and manufacturing base alone is in the region, while the non-polluting R&D sector is in the home country of investment, thus leaving the energy-intensive and pollution-prone aspects of assembly in the eastern coastal region, while a large amount of waste from the mass production of computers is left in China, also producing non-combustible chemicals and heavy metals such as lead, directly damaging the local ecological environment.

Secondly, increase the burden on the ecological environment and increase the cost of environmental governance. High pollution accompanying FDI transfers to China, especially chemical raw materials, textile industry, chemical products and other industries, while the export value is rising, wastewater and waste gas are also increasing.

Emissions and solid waste industry volume are on the rise, increasing the burden on China's ecological environment and increasing the difficulty of governance by China's environmental protection departments. Taking the textile industry as an example, with a global value of \$2.4 trillion and more than 50 million workers (2019 data), is among the most polluting in the world, accounting for some \$460 billions of wasted material. Much of this waste comes from China, which, between raw material use, chemical spills and CO₂ emissions, produces around 70,000 tons per day of material for disposal, generating 53% of the world's textile industry waste. According to Greenpeace, with the textile dyeing stage alone - which uses as many as 72 toxic substances - the Chinese textile industry is responsible for 10% of the world's water pollution. Moreover, China plays a leading role in the textile supply chain, with more than 15,000 companies spread across the country and suppliers to the world's largest textile groups, contributing significantly to the negative impact on the environment.

The fashion industry discharges more than 900 million tons of wastewater every year, which has become one of the sectors with a large amount of industrial wastewater. 4/5 of

textile industry wastewater discharge comes from printing and dyeing wastewater discharge⁹⁹.

The pollutants in the discharged wastewater are becoming more and more complex, and the treatment difficulty is also increasing.

To sum up, it can be said that the potential negative impact on China's ecological environment, national and human security, cannot be ignored.

3.3 FDI impact on society

As already demonstrated above, Foreign Direct Investment (FDI) has played a crucial role in promoting China's economic growth. Employment is an important aspect of economic development, so, in this paragraph it will be done an analysis on the impact that FDI has on society, with particular reference to employment.

Social stability is the ideal state of life for governments and people, and the concept of social stability varies from discipline to discipline. Sociology considers social stability as the orderliness, continuity and normality of society, i.e., smooth operation and coordinated development; Political science focuses on social unrest and defines social stability as the timely resolution of social conflicts and the maintenance of social order. It can be seen that social stability is not a constant and absolute state, but a process of adaptation that is constantly changing and developing. Orderliness is the degree of order in society, and it is only when all parts of society are in harmony with each other, and all tasks are progressing in an orderly manner that social unrest can be avoided and thus social stability can be consolidated¹⁰⁰.

In the existing research on FDI, the relationship between FDI and social stability is seldom involved.

The large amount of FDI inflow has promoted the improvement of residents' income and the transformation of employment structure. At the same time, through the introduction of foreign capital and technology, related enterprises can also improve the added value and competitiveness of their products, the local government's tax revenue can be

⁹⁹ *Ibidem*

¹⁰⁰ LI, Ling, CHEN, Ying, *Impact on Society Stability from FDI in Xi'an City*, School of Geography and Tourism, Shanxi Normal University, Xi'an, 2018.

increased, public infrastructure has been improved, people's livelihood issues have been solved, and social stability has been further consolidated. But the introduction of FDI will also bring corresponding problems. For example, the employment problem caused by the substitution effect¹⁰¹ and by the income effect¹⁰² is greater than the promotion effect, and also the environmental problems caused by high-polluting enterprises has to be considered. These problems will lead to social instability¹⁰³.

It can be seen from the 1994 World Investment Report that with Foreign Direct Investment increases the capital in the host country and this element create job opportunities, moreover, increases local employment through the correlation effect. Therefore, Foreign Direct Investment has had a positive impact on employment in China¹⁰⁴, at the same time, also the negative effects brought by FDI in the country have to be considered.

Today's employment pressures are clearly reflected not only in the interplay between millions of graduate students and a limited number of jobs, but also in the sharp increasing of social unemployment and of the rural labor surplus. The problem of employment difficulties has become a serious issue plaguing the sustainable development of our society, for this reason, it became the focus of scholars and policymakers today. As can be read from the study conducted by Zhong (2019) from 2001 to 2015, the number of people employed in urban foreign-invested enterprises as a percentage of total employment has been on an upward trend. According to statistics, the number of jobs in foreign-invested enterprises alone increased by 11.01 million, which shows that to a certain extent the introduction of foreign investment has played a great role in easing the employment pressure in China¹⁰⁵. The number of people employed in foreign-invested

¹⁰¹ “The effect on the demand for good/of an increase in the price of good when the consumer is compensated sufficiently to remain at the same level of utility. The substitution effect is determined by a move around an indifference curve. Hence, the substitution effect of an increase in a good's own price is always non-positive, and is strictly negative whenever any substitution is possible.” Oxford dictionary (www.oxfordreference.com)

¹⁰² “The change in demand for a good whose price has altered which would have resulted if prices had stayed the same, but incomes had risen or fallen sufficiently to bring the consumer to the same level of welfare as after the price change.” Oxford dictionary (www.oxfordreference.com)

¹⁰³ *Ibidem*

¹⁰⁴ ZHONG, Yi, 外国直接投资对中国就业效应的实证分析(An Empirical Analysis of the Effects of Foreign Direct Investment on Employment in China), China Academic Journal Electronic Publishing House, 2019.

¹⁰⁵ *Ibidem*

units has gradually become more than that of collective units after 2006, but in terms of growth rate, the growth rate of employment in foreign-invested units was high during 2002-2007, and the growth rate was extremely unstable in the last years, even showing negative growth in the 2017-2018 period.

To quantify the effect of employment quality, the average wage of the employed is used. The paper states that the gap between the two started to increase gradually from 2010 onwards, when the upward trend in the amount of foreign investment actually utilised in China was more regular and slower than before 2010; after 2013, the growth rate of the amount of foreign investment actually utilised in China was lower than the growth rate of the average wage of the employed in foreign-invested units, while the impact on the average wage of the total employed was not very noticeable.

The results of a one-dimensional linear regression analysis conducted in the paper based on the actual amount of foreign investment utilised from 2001 to 2015, and on the wages of those employed in foreign-invested units, shows that the quantitative effect of foreign investment on employment in China has both an absorption and a crowding-out effect, which is reflected in the fact that FDI increases enterprise capital and creates employment conditions, but at the same time causes state-owned enterprises and other business units to suffer from a reduction in the number of employees, resulting in layoffs. In terms of the quality of employment, FDI has a positive effect on the average wages of foreign workers in China. The overall average wage level is also gradually increasing, which also indicates that the quality of employment in China is indeed developing for the better¹⁰⁶.

The combined quantitative and qualitative employment effects show that FDI has a positive impact on employment in China, mainly in foreign enterprises, and has a negative impact on state-owned enterprises in certain areas. The advanced technology of foreign enterprises will weaken the market competitiveness of state-owned enterprises, making state-owned enterprises in order to balance profit and loss and reduce costs leading to layoffs and other phenomena, so it is necessary to strengthen the links between foreign enterprises and domestic enterprises in China, encouraging the selection of domestic enterprises as suppliers and service providers of intermediate products, strengthen information exchange, mutually promote the development of domestic enterprises for the better, so that domestic enterprises continue to enhance productivity, which can also

¹⁰⁶ *Ibidem*

provide more possibilities for job creation, making the domestic investment environment sustainable and creating a favorable economic environment in terms of economic growth and employment rates¹⁰⁷.

China's large population and huge employment pressure make innovative and skilled personnel an important criterion for companies to select their employees. Today's age of university students everywhere has improved China's past cultural backwardness, but this has inevitably led to the reality that education is essential. This has left many young people lacking a sense of innovation and even pursuing academic qualifications to the point where their skills are almost not enough. As Chinese manufacturing is never as good as Chinese creation, it is of utmost importance to develop a sense of innovation, and to improve professional skills, and enhance the value of one's labor is an important quality for every contemporary worker. Of course, the study abroad boom continues, and learning advanced technology and cultural knowledge from foreign countries is something that should be actively participated in but applying what you learn and maximizing the effectiveness of the personal value of the returnees is also something that companies should focus on and cultivate¹⁰⁸.

It was argued that the impact of a subsequent increase on domestic employment given by the FDI depends on its direct positive and indirect negative effects. The direct positive effect of FDI on employment refers to the increase in the level of social employment through the creation of new enterprises. The negative effects of FDI on employment include the crowding-out effect of domestic investment and the reduction of employment opportunities due to the higher capital/labor ratio of foreign investment compared to domestic firms¹⁰⁹.

The crowding out effect refers to the reduction of domestic investment and employment opportunities by foreign-owned firms, which have market share taken away from existing domestic firms.

Regarding this, OECD states that “*FDI by OECD-based MNEs may also affect the quality of jobs available in domestic firms when there are knowledge spillovers from foreign to domestic firms. For example, domestic firms may learn from foreign firms by*

¹⁰⁷ *Ibidem*

¹⁰⁸ *Ibidem*

¹⁰⁹ LUO, Yan, TAO, Yu, *F D I 对东道国就业的影响*(Effect of FDI on employment of host country), *Journal of Chongqing University of Technology (Social science)*, Vol 24, No. 3, 2010.

collaborating with them in the supply chain. Knowledge transfers may also result from worker mobility, when domestic firms recruit workers with experience in foreign firms. Finally, increased product-market competition as a result of FDI may strengthen incentives among domestic firms to improve their efficiency. However, FDI does not necessarily have positive effects on the performance of local firms. Under certain circumstances, it may lead to the crowding out of local firms, reducing their ability to operate at an economically efficient scale”¹¹⁰.

At the same time, in this Policy Brief released by OECD, it is assumed that, generally, *“foreign MNEs offer better pay than their local counterparts and foreign-domestic pay differences are particularly important in the context of developing countries. The difference in pay offered by domestic firms and MNEs may reflect the greater technology gap between foreign MNEs and local firms in less developed countries”¹¹¹*; It is to say that, even when we consider the social aspect and the social impact of FDI, technology and innovation still play a massive role.

In their paper, Luo and Tao (2010) argued that the direct positive effect of foreign investment was smaller than the indirect negative effect and that the increase in Foreign Direct Investment not only does not improve the overall level of employment in China but is also detrimental to the increase in domestic employment. This is mainly because the capital/labor ratio of Foreign Direct Investment is higher than that of domestic firms, which induces new domestic investment in capital-intensive industries, with the result that the labor released from labor-intensive industries is not absorbed, thus reducing the employment level of the whole society¹¹².

Generally speaking, as analyzed above regarding the effects of FDI on the economy and environment, it can be reiterated that the entry of foreign-funded enterprises can provide more jobs locally, favoring the employment of residents. At the same time, businesses bring more taxes to the government and more state funds can be invested in local foundations.

As facilities are built, the social security system will become more and more perfect, the income of residents will increase, and the overall quality of life will improve. Therefore,

¹¹⁰ *The Social Impact of Foreign Direct Investment*, Organisation for Economic Co-Operation and Development, Policy Brief, 2008.

¹¹¹ *Ibidem*

¹¹² *Ibidem*

in the initial phase of the introduction of FDI, the positive external effect is evident and has a positive impact on social stability¹¹³.

However, other elements should also be considered: with the rapid increase in the number of FDI, the transformation of the Country's industrial structure is too fast, with a large amount of funds flowing to the secondary and tertiary industries, the development speed of the primary industry is difficult to coordinate with the secondary and tertiary industries, and the income gap between urban and rural residents is gradually widening. So, repeating the above-mentioned concepts, the entry of more foreign-funded enterprises will have a crowding-out effect, and even quickly seize the local market by way of sole proprietorship. The lack of technical funds and other aspects of local enterprises will make it difficult for local enterprises to compete with foreign enterprises, and thus fall into difficulties, and a large number of layoffs have increased, leading to local social instability¹¹⁴.

If the inflow of FDI is too fast, it will lead to a rapid flow of capital to capital-intensive industries in the short term, while labor-intensive industries will be squeezed and the large amount of released labor that cannot be absorbed will cause more people to become unemployed and social stability will decline.

In very useful research conducted in 2013 in which are analyzed the effects of FDI on Chinese employment, in particular reflected into the three sectors of economy (primary, secondary and tertiary), it was highlighted that *"the FDI used in the primary sector has a significant positive effect on employment. To address the problem of the need for expanded employment opportunities in the rural sector of the economy, the Chinese government can attract more FDI focused on the primary sector in the future.*

Also, because of limited work opportunities in urban areas, the large-scale mobility of rural populations from the primary sector to the secondary and tertiary sectors after 2007 may be unsustainable, so the primary sector needs the infusion of greater economic support in general and specifically a greater role for FDI";

For the secondary sector, it is assumed that *"the effect of FDI on employment is not significant, while GDP has a large positive effect on employment. So the Chinese government could choose to expand the four components of GDP for the secondary sector.*

¹¹³ LI, Ling, CHEN, Ying, *Impact on Society Stability from FDI in Xi'an City*, School of Geography and Tourism, Shanxi Normal University, Xi'an, 2018.

¹¹⁴ *Ibidem*

The outcome of the models estimated in this research also shows that total wages has a nearly significant negative effect on employment. However, lower wages will influence GDP downward, so it is very important for the Chinese government to control total wages and maintain wages at a proper level, balancing wages and GDP appropriately according to economic conditions and the government's purpose";

Lastly, concerning the tertiary sector, it is stated that "*the effect of total wages is not significant, while FDI has a negative effect on employment and GDP has a positive effect on employment, with FDI's negative effect bigger than GDP's positive effect. However, FDI is very useful for the development of the tertiary sector and it is helpful for China to become more fully integrated into the world economy, so FDI is needed right now. However, to maintain a high level of employment, the Chinese government needs to allocate more funds to the tertiary sectors to balance the negative effect of FDI*"¹¹⁵.

In Li and Chen paper (2018), where it is analysed the impact of FDI on social stability with a particular reference to Xi'An city, there is a five-point list with suggestion in order to achieve both good economic development and social stability.

These recommendations are very interesting because they can be enforced by Chinese government indiscriminately all over the Country.

Firstly, they suggest that the Government can actively introduce FDI to promote the employment of local residents and increase tax revenue. The increase in employment rate will help improve the degree of social stability; Secondly, when introducing FDI, attention should be paid to the quantity and quality of foreign-funded enterprises, so that labor-oriented enterprises and technology-oriented enterprises can develop in a balanced manner. Labor-oriented enterprises can absorb more surplus labor in the primary industry and increase the overall income of residents. Technology-oriented enterprises will play a greater role. They can not only absorb a large number of high-quality labor, but also help local enterprises to improve their innovation capabilities and enhance their product market competitiveness, thereby bringing more economic benefits to the government and promoting the transformation of the industrial structure. Thirdly, attention should be paid to the coordinated development of the primary industry and the secondary and tertiary industries that will provide farmers with more living subsidies and narrow the gap

¹¹⁵ WEI, Ying, *The effect of FDI on employment in China*, Digital Repository, Iowa State University, 2013.

between urban and rural areas. The economic benefits of the secondary and tertiary industries themselves are higher than those of the primary industry. Therefore, the industrial division of labor will inevitably bring about income gaps while improving social efficiency. This requires government departments to intervene by policy means and give more policy support to disadvantaged industries in order to reduce the gap and reduce social instability. Fourthly, the government should guide FDI to flow to the public infrastructure, such as attaching importance to attracting foreign investment in the transportation industry, communication industry, etc., while obtaining economic benefits, the investment environment can be improved, and it can help attract more FDI in the future. Lastly, the tax revenue brought by FDI should be used more for the construction of local infrastructure and for the improvement of the social security system to further improve the quality of life of the residents, maintain a good social order, and consolidate the stability of the social order.

4. FDI, POLICIES, PLANS AND ENVIRONMENTAL REGULATION

Within the fourth and final chapter of this dissertation, given the importance that has been attributed to it throughout the research, it is necessary to carry out an analysis in which the Chinese regulation on FDI and sustainability are presented and, in addition, also analyze various national initiatives and policies for the development of the latter. After the regulation analysis, will be briefly examined the Catalogue for the Guidance of Foreign Investment Industries drawn up by the Ministry of Commerce in order to understand which sectors and industries in which to invest are most encouraged by the Chinese government and how they are linked to sustainability, later on, it will be cited Made in China 2025 to find out whether or not sustainability is in China's long-term plans, finally, the Thirteen and Fourteenth Five-year Plan also will be discussed.

With the deepening of reform and opening up, China's environmental protection work has been continuously strengthened, and this aspect, for the development of sustainable FDI in the Country is fundamental. How to promote the governance of environmental problems through institutional innovation and achieve effective supervision has become an important issue to be solved urgently in the field of environmental governance in the Country. At the level of institutional practice, the environmental supervision is

accompanied by the parallel advancement of "pollution control" and "energy enhancement". From a global perspective, how to improve the effectiveness of environmental supervision is also a problem that governments are committed to solve. The core concept of system update is to "increase energy first, then control pollution", and promote the improvement of environmental governance performance through the change of the government's role.

The discussion on the path of institutional renewal in China is marked by the promulgation of the Environmental Protection Law in 1989. The Country has established a four-level environmental supervision and management system at the central, provincial, municipal and county levels. Under this framework, the main mechanism of environmental protection work is the pressure transmission based on the bureaucratic structure and the division of responsibility. The resulting information asymmetry and mismatch of rights and responsibilities are an important reason for the "failure" of environmental supervision at the local level. Since 2006, China's central government has promoted the implementation of environmental protection policies at the local level by setting binding indicators, but environmental governance performance has not been significantly improved.

From the perspective of institutional renewal, institutional changes in the field of environmental regulation can be understood within the overall framework of economic and social transformation.

A series of specific measures that the Country carried out since the beginning of the 21st century, include: environmental inspections, special environmental protection actions and centralized rectification, marketization of "environmental assessment", emissions trading, and the "decentralization, regulation, and service" reform of environmental assessment approval.

One of the ways in which China has responded to the gradual emergence of environmental problems has been through a relatively tightly paced centralized approach to address relatively pressing environmental issues. For example, from 2003 to 2005, the State Council launched three consecutive years of special environmental protection campaigns; between 2005 and 2007, the former State Environmental Protection Administration (SEPA) launched four centralized environmental enforcement campaigns. Similar monitoring tools with elements of "campaign-style" governance have been used until now,

with significant efficiency advantages. Beginning in 2015-2016, the central government conducted the first round of environmental protection inspections in 31 provinces (autonomous regions and municipalities) across the country, and 26 provinces across the country successively launched provincial environmental protection inspections, focusing on corporate violations while also informing and interviewing local governments about their environmental inaction. The environmental protection inspectors have become an institutionalized and normalized means of environmental supervision¹¹⁶.

From the end of the 1990s to the present, the continuous deterioration of the ecological environment and the increasingly complex environmental problems have led to a policy shift of cooperation, participation and consultation in the environmental governance of various countries. In China's governance practice, governments at all levels also try to mobilize market or social forces other than administrative resources to achieve active participation, multi-cooperation and collaborative governance concerning environmental governance. For example, the 2005 "Decision of the State Council on Implementing the Scientific Outlook on Development and Strengthening Environmental Protection" requires governments at all levels to use public hearings, demonstration meetings or public announcements to conduct social supervision on development planning and construction projects related to the public's environmental rights and interests. During this period, the public and environmental protection organizations played an active role.

The participation of non-administrative forces gradually formed an effective supervision network. At the same time, the central environmental protection department has also begun to try to use economic leverage to find effective ways to curb the spread of pollution, such as jointly launching a green credit mechanism with the People's Bank of China and the China Banking Regulatory Commission.

In 2014, the General Office of the State Council issued the "Guiding Opinions of the General Office of the State Council on Further Promoting the Pilot Work of the Paid Use and Trading of Pollution Rights" to give full play to the market mechanism to promote environmental protection and pollutant emission reduction.

¹¹⁶ MA, Yuan, *督政与简政的“平行渐进”：环境监管的中国逻辑* (Parallel Gradualism: Institutional Evolution with Chinese Style in Environmental Regulation), China Academic Journal Electronic Publishing House, 2021.

As already mentioned, since 1978, year in which were enacted the economic reforms, China has received a massive inflow of Foreign Direct Investments. With the advent of all these investments, China faced serious pollution problems that led the Country to enact, first in 1978 provisionally, and then in 1989 definitively, the Environment Protection Law (EPL).¹¹⁷

In 2014 this Law was revised for the third time to make it more effective by making it more stringent. In particular, during the revision process, the focus was set on seven major controversies, which, following to an article written by Zhang L., He G. and Mol A. P. are¹¹⁸:

1. Abandonment of the “limited revision” principle (that brought an increased number of chapters from six to seven and articles from 47 to 70, compared to that of 1989);
2. Reaffirmation of environmental protection as basic national policy (that ensures that economic development must be coordinated with environmental protection instead of the other way around as it was in the 1989 version);
3. Strengthening of strategic environmental assessment (requires that full environmental impact assessment reports must be made available to the public and encourages ministries and provincial level governments to consider environmental impacts when economic and technology development policies are developed)
4. Strengthening and institutionalization of public participation and information disclosure (specifies that Public participation and environmental information disclosure has to be promoted);
5. Strengthening implementation through new instruments (implements new market-based instruments to improve environmental performance of industries);
6. Holding local governments and officials accountable (gives local governments larger environmental responsibilities and the possibility to have more stringent policies than the national one)

¹¹⁷ JING, Zhang, XIAOLAN, Fu, *FDI and environmental regulations in China*, Journal of the Asia Pacific Economy, 2008.

¹¹⁸ Zhang, L., He, G., Mol, A. P., *China's new environmental protection law: A game changer?*, Environmental Development, 2015.

7. Improving law enforcement (introduces a more severe daily penalty system as long as environmental violation continues and with no maximum)

As Article 1 of the Environment Protection Law (环境保护法 *Huanjing baohu fa*) states “This Law is enacted for the purpose of protecting and improving the environment, preventing and controlling pollution and other public hazards, safeguarding public health, promoting the construction of an ecological civilization, and fostering sustainable economic and social development”¹¹⁹.

Another important progress was the Law of the People's Republic of China on Environmental Impact Assessment (EIA Law), following article one “this Law is enacted in order to implement the strategy of sustainable development, to prevent adverse impacts on the environment caused by the implementation of planning and construction projects, and to promote the harmonious development of the economy, society and the environment”¹²⁰. This Law requires companies to investigate the effect of projects on communities and the environment before starting construction.

After this brief introduction about the changes on the policies issued by the Chinese government, it can be stated that the efforts made by the government in order to secure environmental protection are ongoing and, moreover, the investments made during the period 1987-2004 to try not to make this effort futile, can be demonstrated by the following graph:

¹¹⁹ “保护和改善环境，防治污染和其他公害，保障公众健康，推进生态文明建设，促进经济社会可持续发展，制定本法” (original version). The entire article can be found on the Chinese Government website: www.gov.cn

¹²⁰ “为了实施可持续发展战略，预防因规划和建设项目实施后对环境造成不良影响，促进经济、社会和环境的协调发展，制定本法” Ministry of Ecology and Environment of the People's Republic Of China (full text on www.mee.gov.cn)

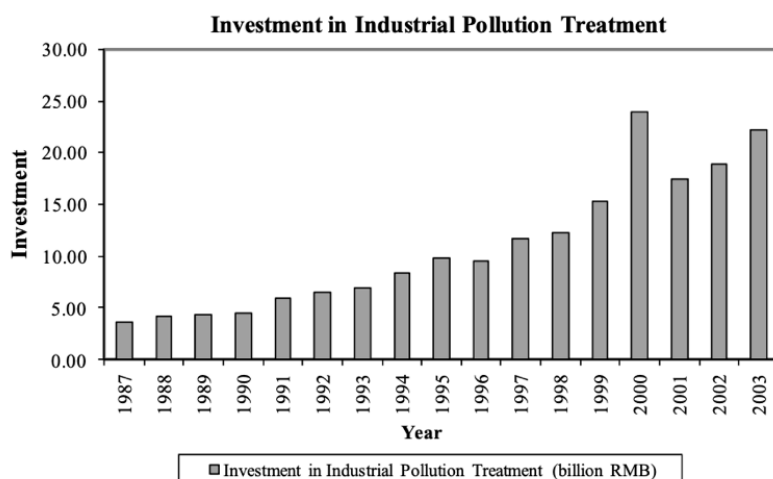


Figure 1.

Source: Jing Z., Xiaolan F., *FDI and environmental regulations in China*, Journal of the Asia Pacific Economy, 2008.

As already demonstrated with the graph above, Chinese Government set the green development as one of its goals since decades, especially in these last few years. As an article reported on December 3, 2021: “China’s industry ministry on Friday unveiled a five-year plan aimed at the green development of its industrial sectors, vowing to lower carbon emissions and pollutants and to promote emerging industries so as to meet a carbon peak commitment by 2030”¹²¹. This proves that the country will commit its efforts to achieve the goal.

After the introduction about the Laws and Policies emanated by the Government concerning the environment, it is considered useful to make also a quick mention of the Law of the People’s Republic of China on Foreign Investment in order to analyze in details the relationship between sustainability and FDI and what is the Government doing in order to tackle this aspect.

In 2019, becoming effective in 2020, was promulgated the Foreign Investment Law of the People’s Republic of China. The Law, following Article 1, is “formulated in accordance with the Constitution of the People’s Republic of China in a bid to further expand opening-up, vigorously promote foreign investment, protect the legitimate rights and interests of foreign investors, standardize the management of foreign investment,

¹²¹ ZHANG, Ming, PATTON, Dominique, *China releases five-year green development plan for industrial sectors*, Reuters, 2021. <https://www.reuters.com> (last consultation on: 03/06/2022)

impel the formation of a new pattern of all-around opening-up and boost the sound development of the socialist market economy”¹²².

This law is a milestone in the Chinese reform of foreign investment management system, because, in order not to compromise a Country’s equilibrium, FDI issue must be regulated through a set of laws which establish a proper development of the Chinese economy and the environment.

The Foreign Investment Law will not only bring about changes in the foreign investment management system, but also push China's socialist market economic system to a more mature stage and lay the foundation for China's participation in the construction of an open world economy¹²³.

An important breakthrough of the "Foreign Investment Law" is to legally define the system of pre-establishment national treatment plus a negative list.

This aspect is mentioned in the Article 4 of the Foreign Investment Law, that states: *“The Negative List for Foreign Investment Access (hereinafter referred to as the Negative List) shall be proposed by the competent investment department of the State Council in conjunction with the competent department of commerce of the State Council and other relevant departments, and shall be submitted to the State Council for publication or shall be issued by the competent investment department and the competent commercial department of the State Council after being submitted to the State Council for approval. The state adjusts the negative list in due course according to the needs of further opening to the outside world and economic and social development. The procedures for adjusting the negative list shall be governed by the provisions of the preceding paragraph”¹²⁴.*

The negative list for foreign investment access has been an important tool for China's opening up since its pilot operation in the Shanghai in September 2013, and the negative list management system has been extended nationwide since October 2016 and has been

¹²² Full original text on www.gov.cn

¹²³ CUI, Fan, WU, Songbo, 《中华人民共和国外商投资法》与外商投资管理新体制的建设 (The Foreign Investment Law of the People’s Republic of China and the Construction of a New System for Foreign Investment Management), International Trade Issues No. 4, 2019.

¹²⁴ Original article: “外商投资准入负面清单（以下简称负面清单）由国务院投资主管部门会同国务院商务主管部门等有关部门提出，报国务院发布或者报国务院批准后由国务院投资主管部门、商务主管部门发布。

国家根据进一步扩大对外开放和经济社会发展需要，适时调整负面清单。调整负面清单的程序，适用前款规定。” (Full original text on: www.gov.cn)

improved in the last years. After the implementation of the Foreign Investment Law, the current foreign investment approval and record-keeping system may have to fade out. In areas outside the negative list, foreign-invested enterprises can apply directly for business registration to operate, just as domestic enterprises do, and those requiring a licence can apply for a license to operate their projects, just as domestic enterprises do. In terms of market access and commercial registration, foreign investors are, in principle, treated no less favorably than domestic investors.

In the early years of reform and opening up, China mainly used preferential measures as a tool to attract foreign investment. The implementation of the Enterprise Income Tax Law in 2008 has brought the income tax regime for domestic and foreign investors into line, laying the foundation for a balanced playing field for both domestic and foreign investors. At the same time, some preferential measures for foreign investors (e.g. tariff exemptions for foreign-invested enterprises importing equipment for their own use) have been introduced.

It should be noticed that legislation on foreign investment is not uncommon in countries around the world, and some of them use names similar to those of China, but it is relatively rare to find a separate law that comprehensively regulates the conduct of foreign investment¹²⁵.

The spirit of the Foreign Investment Law is that, apart from the ever-shrinking negative list and exceptions stipulated by laws, regulations, and the State Council, in principle, there should be no differences in regulatory standards between domestic and foreign investment based on differences in identity. According to the principle of "competitive neutrality" mentioned many times by the State Council in the Law, state-owned investment, private investment and foreign investment should enjoy equal treatment in supervision.

The Foreign Investment Law will promote a high level of comprehensive opening to the outside world, and industries including finance, automobiles and other industries have specified the timetable for the removal of equity restrictions in the negative list of foreign investment access. The national treatment, equal supervision of domestic and foreign capital, and the principle of "competitive neutrality" have been continuously emphasized by the government, indicating that China will build a high-level fair competition system.

¹²⁵ *Ibidem*

The promulgation of the law fully demonstrates that China encourages foreign investment and is committed to building a high-level business environment, enabling Chinese and foreign companies to gain greater development space and share development dividends through cooperation and fair competition in the huge market of China¹²⁶.

On April 10, 2018, President Xi Jinping emphasized in his keynote speech at the opening ceremony of the Boao Forum for Asia Annual Conference proposed that China will take four major measures to expand its opening up:

1. Significantly broaden market access, relax restrictions on foreign shareholding in the financial industry, and ease restrictions on foreign investment in industries such as automobiles as soon as possible;
2. Create a more attractive investment environment and complete the revision of the negative list for foreign investment;
3. Strengthen intellectual property protection;
4. Take the initiative to expand imports.

Over the past years, significant and substantial progress has been made in the above-mentioned areas.

The change in regulations was made because we cannot deny that there were some problems in China's legal system related to foreign investment, such as the lack of systematization of the legal system for foreign investment. As already mentioned, legislative bodies at different levels have promulgated different types of legal norms involving foreign investment within their respective powers. Different rules are intertwined and complex, and lack the guidance of higher-level laws, which is not conducive to the effective implementation of the rules to a certain extent. In addition, some laws and regulations have been formulated for a long time, and the relevant content cannot effectively become the legal guarantee for promoting the current foreign investment and economic development. On the other hand, under the guidance of accelerating the implementation of the free trade area strategy, the number of bilateral investment treaties and/or free trade agreements signed by China with other countries and/or regions has steadily increased, and the implementation of these agreements requires to be backed by domestic law.

¹²⁶ ZHANG, Xiaoqiang, *Thoughts on Foreign Investment Law of the People's Republic of China and China-US Two-way Investment*, Globalization No. 9, 2019.

As the Foreign Investment Law is a basic law that governs the development of China's foreign investment field, the relevant rules and how these rules should be related to China's existing foreign investment legal system have aroused widespread concern in the academic circles. To maintain international coordination is also a legal issue that needs attention, and with the new Foreign Investment Law (2019), also this was taken into account. Considering that both domestic law and international law in the field of foreign investment should become a systemic legal norm to promote foreign investment in China, it was necessary to integrate the Foreign Investment Law with the existing domestic foreign investment legal system.

To sum up, the Foreign Investment Law was a game changer for the Chinese development concerning Foreign Direct Investments, in particular, if we take into account the new Foreign Investment Law and the Environmental Protection Law together, it can be noticed that China is really improving with its own means the concept of sustainability, broadly intended as Economic, Environmental and Social. This because these two provisions consider many aspects that can help the Country to achieve great results.

4.1 MOFCOM: Negative List of Foreign Investments

The Chinese Ministry of Commerce (MOFCOM), after the review of the Foreign Investment Law in 2019, releases every year a List (外商投资准入特别管理措施) in which there are the encouraged and discouraged investments. The List does not only refer to Foreign Investment, but also to Domestic Investment.

In the current PRC legal framework regarding foreign investment, as specified by the Foreign Investment Law, the Negative List refers to special administrative measures for accessing investments foreigners in specific sectors. Therefore, the latter source represents the regulatory reference principal with regard to the restrictions to which foreign investments are subject.

As Article 1 recites *"The "Special Administrative Measures for Foreign Investment Access (Negative List)" (hereinafter referred to as the "Negative List for Foreign Investment Access") unifies the special administrative measures for foreign investment access, such as equity requirements and senior management requirements. Areas outside the Negative List for Foreign Investment Access are managed in accordance with the*

*principle of consistency between domestic and foreign investors. The relevant provisions of the Negative List on Market Entry are uniformly applied to domestic and foreign investors*¹²⁷. It is extremely important to specify that Foreign and Domestic Investors are treated equally because, in order to achieve sustainability, the coordination between Domestic and Foreign is essential.

Going into details, the Chinese Negative List of Investment is composed of 31 bullet points divided into twelve sections.

The table below presents the complete Negative List of Investments.

Section 1: Agriculture, forestry, animal husbandry and fishery	
1.	The Chinese Party for the selection of new wheat varieties and seed production shall hold no less than 34% of the shares, and the selection of new corn varieties and seed production must be controlled by the Chinese Party.
2.	It is prohibited to invest in the research and development, breeding, planting and production of related reproductive materials of China's rare and unique precious and fine varieties (including excellent genes for planting, animal husbandry, and aquaculture).
3.	Investment in breeding genetically modified varieties of crop seeds, livestock and poultry breeds, and aquatic breeds, as well as manufacturing of genetically modified seeds (seedlings) thereof, shall be prohibited.
4.	It is prohibited to invest in the fishing of aquatic products in the waters under the jurisdiction of China and inland waters.
Section 2: Mining Industry	
5.	Investment in beneficiation of rare earths, radioactive minerals, tungsten exploration and mining shall be prohibited.

¹²⁷ “《外商投资准入特别管理措施（负面清单）》（以下简称《外商投资准入负面清单》）统一列出股权要求、高管要求等外商投资准入方面的特别管理措施。《外商投资准入负面清单》之外的领域，按照内外资一致原则实施管理。境内外投资者统一适用《市场准入负面清单》的有关规定”。(Special Administrative Measures for Foreign Investment Access (Negative List), 2021.

Section 3: Manufacturing	
6.	Printing of publications shall be controlled by Chinese parties.
7.	It is prohibited to invest in the application of processing technologies such as steaming, frying, roasting, and calcining of Chinese herbal medicines and the production of proprietary Chinese medicines with secret prescription products.
Section 4: Electricity, heat, gas and water production and supply	
8.	The construction and operation of nuclear power plants must be controlled by Chinese parties
Section 5: Wholesale and retail trade	
9.	Investment in the wholesale and retail of tobacco, cigarettes, re-dried tobacco leaves and other tobacco products are prohibited.
Section 6: Transport, warehousing and postal services	
10.	Domestic water transportation companies must be controlled by the Chinese side.
11.	Public air transportation companies must be controlled by the Chinese party, and the proportion of investment by a foreign enterprise and its affiliates must not exceed 25%, and the legal representative must be a Chinese citizen. Aviation companies serving agricultural, forestry and fishery fields shall be restricted to joint ventures and other general aviation companies shall be held by a Chinese party.
12.	The construction and operation of civil airports must be relatively controlled by the Chinese party. Foreign parties shall not participate in the construction or operation of airport towers.
13.	Investment in postal companies, domestic courier and mail services is prohibited.
Section 7: Information transmission, software and information technology services	
14.	Telecommunications companies are subject to the provision of telecommunications services opened up pursuant to China's WTO commitments; the foreign share ratio for value-add telecommunications services (except for ecommerce, domestic multi-party communications, storage-forwarding, and call centers) shall not

	exceed 50%; and the controlling stake shall be held by the Chinese party for basic telecommunications services.
15.	Investment in Internet news and information services, Internet publishing services, Internet audio-visual programme services, Internet cultural operations (except for music) and Internet public publishing information services is prohibited (among the above services, except for those that have been opened up in China's WTO accession commitments).
Section 8: Leasing and business services	
16.	Investing in Chinese legal affairs (except for providing information on the impact of the Chinese legal environment) and becoming a partner in a domestic law firm is prohibited.
17.	Market surveys shall be limited to the form of equity joint venture; for radio and television rating surveys therein, the controlling stake shall be held by the Chinese party.
18.	Investment in social surveys is prohibited.
Section 9: Scientific research and technology services	
19.	Investment in human stem cell, gene diagnostic and therapeutic technology development and application is prohibited.
20.	Investment in humanities and social sciences research institutions is prohibited.
21.	To invest in geodetic surveying, marine surveying and mapping, aerial photography for surveying and mapping, ground motion surveying, and surveying and mapping of administrative boundaries, preparation of topographic maps, world administrative area maps, national administrative area maps, maps of administrative areas at or below the provincial level, national teaching maps, local teaching maps, true three-dimensional maps and electronic navigation maps; and regional geological mapping, mineral geology, geophysics, geochemistry, hydrogeology, environmental geology, geological disasters, remote sensing geology and other surveys (the mining right holders are not

	subject to these special administrative measures when carrying out work within the scope of their mining rights) are prohibited.
Section 10: Education	
22.	Primary school education, ordinary high school, and higher education institutions are subject to Sino-foreign cooperative education and must be led by the Chinese Party (the president or the chief executive shall have Chinese nationality, and the Chinese Party shall comprise not less than half of the council, board or joint administrative committee).
23.	To invest in compulsory education institutions and religious education institutions is prohibited.
Section 11: Health and social work	
24.	Medical institutions are limited to the form of equity joint ventures
Section 12: Culture, Sport and Entertainment	
25.	Investment in news organizations (including but not limited to news agencies) is prohibited.
26.	Investment in the business of editing, publishing and production of books, newspapers, periodicals, audiovisual products and electronic publications is prohibited.
27.	Investment in various levels of radio stations, television stations, radio and television channels (frequencies), radio and television transmission network (transmitter stations, relay stations, radio and television satellites, satellite uplink stations, satellite receiving stations, microwave stations, surveillance stations, and cable radio and television transmission network, etc.) shall be prohibited. It is also prohibited to engage in the business of video broadcasting by order of radio and TV and the installation services of ground receiving facilities for satellite TV broadcasting.
28.	Investment in radio and television program production and operation (including introduction of businesses) companies is prohibited.
29.	Investment in film production companies, distribution companies, cinema companies and film introduction businesses is not permitted.

30.	Investment in auction companies for heritage auctions, heritage stores, and state-owned heritage museums shall be prohibited.
31.	Investment in performing arts groups is prohibited.

The above list specifies:

1. sectors prohibited from foreign investment, such as fishing for aquatic products in marine areas under Chinese jurisdiction and in inland waters, trade wholesale and retail of tobacco leaves, cigarettes, re-dried tobacco leaves and other products tobacco-based, postal services and mail delivery activities nationwide;
2. sectors which are limited to foreign investments (therefore subject to certain requirements), such as construction and operation of nuclear power plants, companies for national water transport (for which mandatory control by the Chinese partner is required), the companies for air transport public (in which the control of the Chinese side must be ensured, providing for a limit 25% investment to a single foreign party as well as requesting the appointment of a legal representative of Chinese citizenship).

In the List, the sectors are classified as "encouraged", "permitted", "restricted" and "forbidden" to foreign investors: for "encouraged" investments, the investor can benefit from the so-called "National treatment", thus being equated from a regulatory point of view to a Chinese investor; with regard to investments subject to restrictions, the investor may make the investment in compliance with certain limitations and conditions (e.g. in terms of the maximum percentage of participation in the share capital); as far as "prohibited" investments are concerned, they must be considered completely banned for foreign investors. On the other hand, any sector not expressly mentioned is included among the "permitted" investments.

Compared to previous years, the main changes in the 2021 Negative List are the following: the Negative List 2021 removes the restrictions on the participation of foreign investors in market surveys. However, for the radio and television rating surveys, the controlling stake will be held by the Chinese side, moreover, envisages, for the first time, the revision of the foreign listing of national companies. This means that if a domestic company is engaged in an industry where foreign investment is prohibited, its share issue and listing overseas will be subject to review and approval by the Chinese government, and foreign

investors will not participate in the operation and to the management of that company, and its participation will not exceed that required by the Chinese securities regulation.

Many overseas-listed Chinese companies are engaged in areas where foreign investment is prohibited, such as Internet information services. This practice will now be scrutinized to prevent foreign investors from circumventing the restrictions on the Negative List in this way.

In addition to the list of negative investments above, the MOFCOM also releases a list of investments considered to be encouraged.

The Encouraged Catalogue is the main regulatory reference for the preferential treatment that can be enjoyed by foreign investors. The current Encouraged Catalog covers 1235 articles, of which 480 are applied nationally and the remainder is applied only to foreign investments made in specific provinces in central-western China.

Foreign investments subject to the Encouraged Catalog may, as appropriate and based on their location, enjoy some preferential treatments such as exemption from rates for equipment imported for use on the farm, a preferential business income tax of 15% (instead of 25% as is normally expected), priority schemes and subsidized prices for the purchase of land.

Some of the categories discussed, such as Agriculture, forestry, animal husbandry and fishery or mining, for example, are the same as in the Negative List, with the difference, however, that positive investments are indicated here.

Again, the List of investments considered positive for the Country is very detailed. Some examples of encouraged investments are: “breeding and development of new plant varieties for high-yielding and efficient silage”, “Development and production of infant formulae, supplementary foods for infants and young children, special medical use formulae and health food”, etc.

Of course, this list broadly considers the sustainability in all its aspects. It is mentioned various times that the environment protection must be respected and that it has to be taken into account this aspect for the investment to be considered positive.

In addition to these lists of investments that the Ministry of Commerce releases, for the year 2021 a guide for foreign direct investments was also released by MOFCOM. The document is very detailed, and, among other things, it also mentions China's

environmental goals to be achieved in the coming years. It is cited various times also the 14th Five-Year Plan that will be dealt with later on in this dissertation.

Concerning the environment and regulation, in the document it is reported that “*President Xi Jinping pledged that China would scale up its Intended Nationally Determined Contributions by adopting more vigorous policies and measures, to have CO2 emissions peak before 2030 and achieve carbon neutrality before 2060*”¹²⁸. Sustainability is not specifically addressed, in fact, China's goals for regular economic and social growth are mentioned several times. It goes naturally that, consequently to economic and social development and the better use of both domestic and international markets and resources, new advantages in international cooperation and competition will be forged, developing a more and more sustainable business environment.

4.2 MADE IN CHINA 2025 (中国制造 2025)

Made in China 2025 (中国制造 2025) is a strategic plan launched by the Chinese Prime Minister in May 2015 and which is described by the Center for Strategic and International Studies as an "initiative for the overall promotion of Chinese industry", having itself inspired by the German initiative known as Industry 4.0. This plan represents an attempt to bring the country's production up to the level of a value chain. Among the objectives there is to increase the domestic content of basic materials to 40% by 2020 and to 70% by 2025.

The plan focuses on high-tech sectors, including a new generation of technology, information, CNC machines and high-end robots, aerospace equipment, marine engineering equipment and high-tech ships, advanced transportation equipment railway, low-consumption and new-energy vehicles, electrical equipment, agricultural machinery and equipment, new materials, biomedicine and high-performance medical industry.

Following the slowdown of the Chinese economy and the decrease in global purchasing capacity, as well as in response to the problem of overcapacity, the Chinese government decided in 2006 to undertake a series of reforms, this time conceived in a completely

¹²⁸ Foreign Investment Guide of the People's Republic of China, Ministry of Commerce of the People's Republic of China, 2021 version.

different way than previously. It starts by analyzing the concept of 'made in China', an idea that evokes a labor-intensive product with low added value, usually attractive because it is cheap. This label effectively sums up the result of the type of policies implemented by the government up to then and the characteristics that defined the Chinese industrial sector until the first decade of the year 2000. But now the CPC's goal for the country's future, to sustain its economic growth and thus not lose leadership legitimacy, becomes that of revolutionizing the meaning of 'made in China', proposing not only to finish the technological catch-up process, but to become a world leader in the production of cutting-edge technologies¹²⁹.

Made in China 2025 is the main strategic plan whose goal is "*improving the quality of products made in China, creating China's own brands, building a solid manufacturing capability by developing cutting-edge advanced technologies, researching new materials, and producing key parts and components of major products*"¹³⁰. This is the first phase of a long-term project that expects to end in 2049, the year of celebration of the 100th anniversary from the birth of the People's Republic of China, which is undertaken in a chronological way and by objective as follows:

- First phase (2015-2025): to join the group of countries recognised as world leaders in manufacturing;
- Second phase (2026-2035): to acquire a leading position among the countries industrial countries;
- Third phase (2036-2049): to become the absolute leader in innovation at the industrial level, definitively transforming the idea of "Made in China".

The fields identified by the Chinese government as deserving investment and new policies are the result of a careful selection made by the relevant ministries, which includes a synthesis of those specific areas in which each cutting-edge industrial power vanguard is specializing in, the same areas in which the national innovation effort has the greatest likelihood of success, given its capabilities¹³¹.

¹²⁹ FARISELLI, Patrizia, *La Cina nel Mercato Globale* (China in the global market), Università di Bologna, 2020.

¹³⁰ LI, Ling, *China's manufacturing locus in 2025: With a comparison of "Made-in-China 2025" and "Industry 4.0"*, Technological Forecasting and Social Change, Volume 135, 2018.

¹³¹ FARISELLI, Patrizia, *La Cina nel Mercato Globale* (China in the global market), Università di Bologna, 2020.

Kenkerdine (2017) reports in the paper a thorough list of initiatives undertaken by the government in each sector¹³²:

1. Robotics: *“Given the decrease in labour factor productivity, together with the need to speed up and modernise production processes, there are considerable efforts for the integration of robotics in manufacturing clusters, accompanied by an accompanied by an Industrial Internet system, with the precise aim of coordinating smart machinery into the broader concept of the Internet of Things - IoT. However, the speed with which the sector is expanding highlights a potential problematic issue: the fiscal policies implemented at provincial level risk produce overcapacity, if investments are not diversified and stimulate Merger&Acquisition activities between similar companies”*¹³³;
2. High-speed Rail: *“High-speed rail is one of the most important pieces of Made in China 2025, and a sector that has long attracted a lot of investment and technology transfer from abroad, as it is crucial for the transport of raw materials to China and for the distribution chain of its manufacturing sector. The government's goal by 2030 is to extend a rail network of at least 200,000 kilometres to all population centres with a population of over 200,000”*¹³⁴;
3. Aerospace, Satellites and Communications: *“The space race and the creation of satellite technologies are historically a key step in the development of the world's major powers.. Just as the United States and Russia did to assert their national superiority during the Cold War period, so today the Chinese government has developed a complex space programme, intended as an important mean of assertion of national sovereignty, as well as political and military”*¹³⁵, moreover, *“the development of satellite technologies is an investment that can prove to be highly profitable from a strategic point of view, offering the possibility of establishing institutions and standards for other countries in the same race, but it is also the same race, but it is also important from an economic point of view, just consider the numerous commercial applications of satellite technologies. In this*

¹³² KENDERDINE, Tristan, *China's Industrial Policy, Strategic Emerging Industries and Space Law*, Asia and The Pacific Policy Studies, 2017.

¹³³ FARISELLI, Patrizia, *La Cina nel Mercato Globale* (China in the global market), Università di Bologna, 2020.

¹³⁴ *Ibidem*

¹³⁵ *Ibidem*

sector, rather than implementing real policies, the government's effort in recent years has been oriented towards developing an appropriate framework of laws and regulations”¹³⁶;

4. Integrated Circuits, Internet of Things and Cybersecurity: *“In recent years, has spread the concept of Industry 4.0: a revolutionary way of thinking about manufacturing that, if properly developed, would contribute significantly to the GDP growth of an economy. The idea is to transform manufacturing machinery by integrating it with state-of-the-art technologies, thanks to a joint effort of government and the private sector, industry and academia. Technological progress in manufacturing can be measured through indicators of quality, productivity and cost, which complement each other. The focal point of every industrial revolution is precisely the consideration of how to improve productivity and efficiency, and today the solution seems to lie in the use of Internet and other smart devices to make the industry more flexible”¹³⁷;*
5. Energy Equipment: *“l’industria energetica è una parte cruciale di Made in China 2025, già da tempo supportata dal governo con incentivi fiscali. La produzione di energia rinnovabile, in particolare, viene promossa nell’area metropolitana che circonda Pechino, Jingjinji, e nei Delta del Fiume delle Perle e del Fiume Giallo, rispettivamente nel Guangdong, Jiangsu e Zhejiang, e nelle più importanti aree portuali della Cina sud-orientale. La strategia nazionale per la produzione di energia è anche basata sul settore del nucleare: nel 2016 la China Ship-building Industry Corporation - CSIC ha intrapreso la costruzione di centrali nucleari galleggianti, con l’utilizzo di 20 reattori di proprietà del China General Nuclear Power Group”¹³⁸;*
6. New and Advanced Materials: *“Innovation in the materials industry lies at the root of the success of several sectors of the Chinese economy, including upgrading the traditionally understood industrial sector, high-tech manufacturing and emerging sectors. The focus is on transforming basic raw materials to make them innovative and the targets are numerous: iron and steel, non-ferrous metals,*

¹³⁶ *Ibidem*

¹³⁷ *Ibidem*

¹³⁸ *Ibidem*

petrochemicals, light industry products, and materials for the textile industry; for high-end equipment, materials innovation involves metal alloys, high-performance separation membranes, optical fibres, semiconductors and rare earths. Graphene, 3D printing, superconductors and smart bionic technologies are priority targets of China's efforts in this sector"¹³⁹;

7. *New Energy Vehicles and Batteries: "This is one of the areas where China is a major global competitor, but where it has achieved controversial results. To promote functional collaboration in the sector, was established the National Battery Power Innovation Centre. However, the massive commitment of government bodies in this sector has generated the same problem of overcapacity that has already emerged in the photovoltaic sector. Excessive investment as a result of a generous subsidy policy in the renewable industry has led to an overcrowding of companies in the sector, with the result that the per-capita energy portion has effectively decreased. The fact that competition at the provincial level is in turn played out by subsidies at the local level has favoured investment in low-level technologies and caused a dispersal effect of effort that should instead be aimed at knowledge sharing"*¹⁴⁰;
8. *Pharmaceuticals and Medical Equipment: "The establishment of a new Pharmacy Law in 2017 has resulted in the biotechnology sector moving in the direction of biomedical engineering, biotech agriculture, and conventional chemical and medical manufacturing. In the catalogue of emerging sectors, China also made a strategic effort in marine and ocean resources, including bioactive marine substances and other biological products. Genetics has also witnessed significant innovative growth with the Legislative Work Plan of 2016, which includes regulations for Human Genetic Resources Management for domestic development, and measures for Access to Genetic Resources Management allowing access to the global commons in genetics. In general, the aim in the genetic sector, as in the chemical sector, is to absorb foreign genetic technology and jointly develop a domestic genetic industry"*¹⁴¹;

¹³⁹ *Ibidem*

¹⁴⁰ *Ibidem*

¹⁴¹ *Ibidem*

9. Marine Energy and Seabed Mining: *“China's presence on the seas and oceans is certainly vital for the assertion of national sovereignty, not least because of its important economic implication. The government has resorted to the norms of global governance with regard to the oceans, seeking to exploit them to its advantage. The clash with Japan over the Diaoyu Islands, like the expansion into the South China Sea with attempts to extend Chinese rights over the seabed are part of a policy that also takes into account the profitability of such territorial claims. Added to these maneuvers are agreements with countries bordering the seas and oceans crossed by the Belt and Road Initiative - BRI. At the institutional level, the Basic Ocean Law and the Seabed Law were emanated in 2016, and the Mineral Resources Law is aimed at defining measures on offshore mining exploitation”*¹⁴².

By focusing on these industrial sectors, China is relaunching some of the objectives already present in the thirteenth five-year plan (2016-2020), which had defined the need for technological advancement and the rethinking of the Chinese development model, announcing the country's entry into a new phase of economic development called "New Normal". With the slowdown in Chinese growth, in fact, and the difficulty in absorbing the enormous production capacity of the Country, internally as well as abroad, the country felt the need to start a conversion of production from a regime to "quantitative" nature to a more "qualitative" one.

In this way, Made in China 2025 attempts to give a programmatic impulse to the Chinese industrial sector in an attempt to push Chinese manufacturing higher on the global value chain and thus get closer to the standards of large, industrialized countries.

Made in China 2025 therefore chooses key sectors on which to focus to ensure the country a competitive advantage in the race for technological advancement. The aforementioned sectors together represent 40% of Chinese manufacturing production with high added value: investing in their expansion would mean giving a huge boost to the Chinese high value industry.

Given the abovementioned list, it can be stated that in the long-term plans of China there surely is innovation. Innovation, given the premises of this dissertation together with all the explanation on the impact that FDI has on Economy, Environment and Society, is

¹⁴² *Ibidem*

fundamental in order to achieve sustainability, so the efforts that China is making in order to develop its economy is certainly essential. The efforts undertaken to make China a more innovative country in all respects and the policies adopted are not entirely geared towards sustainability, but, in some ways, improving the quality of investment and technology in the various fields mentioned above could certainly influence the Country's development in a more sustainable way in all respects.

Made in China 2025 is surely a good starting point for China and could surely ameliorate the Country's weak points in order to make it a more innovative Country and, by doing so, enhancing the quality of life.

4.3 13th and 14th Five-Year Plans

To understand how and if the Country's sustainable growth is in China's long-term plans, it is considered of great importance to jointly analyze the Thirteenth and Fourteenth Five-Year Plans to understand what China's goals are.

First of all, it is adequate to specify that the Thirteenth Five-Year Plan (中华人民共和国国民经济和社会发展第十三个五年规划) covered the period 2015-2020, while the Fourteenth covers and will cover the period 2021-2025.

In general, the definition of the Five-Year Plans is developed with the aim of guiding social, political and economic development for the duration of 5 years.

The drafting of the key points of the 13th Five-Year involved, in addition to the political leaders of the Chinese Communist Party, also eleven operators from the private sector; this aspect demonstrates the desire for openness towards a different and less public structure.

The Plan introduces several changes compared to the previous one, which can be traced back to the objectives of growth, consumption, so-called "Green economy", and structural reforms with a view to greater competitiveness of the internal market.

The purpose is to propose reforms to solve the main problems affecting the country: from overcoming the distortions of the financial system, to greater transparency in the administration of public enterprises and the removal of unproductive companies under state control. What the Chinese financial system needed was a reform that led to a reduction in the interference of politics and the state in business affairs.

Furthermore, it is necessary to entangle the problem of all the led state-owned enterprises, which are often inefficient, to have easy access to credit thanks to favoritism and privileged relations with the political apparatus; while other private companies, which potentially have a great chance of growth, do not find the support of interested banks and investors.

In the 13th Five-Year Plan, it was stated that the Country wanted to reinvest part of the resources used on the export front to increase the volume of domestic consumption. China has traditionally favored an economy based on state investment and has particularly benefited from low labor costs to establish itself as the "factory of the world". This system, despite having led China towards extraordinary economic growth, has generated a series of problems with regard to the unequal distribution of wealth, excess capacity in certain sectors and environmental pollution.

The improvement of structures and management in the welfare sector aimed at guaranteeing considerable savings for citizens, increasing the resources to be allocated to consumption. The increase in labor costs and the aging of the population make it necessary to find new channels to maintain economic momentum. Among these, the plan has therefore opted for a change in the management of the social sector and health care, alongside the abandonment of the rigid one-child policy.

The national government set an economic growth target of 6.5% over five years. Such a growth rate, although less than the 8% achieved with the 12th five-year plan, remained among the highest in the world and confirms the primary role that China will continue to play in the global economy. The realization of this goal required, however, new growth engines compared to the traditional industrial sector, such as consumption and innovation, to which the plan significantly places particular emphasis.

Finally, the most interesting part to notice in relation to this dissertation is that the goal of reforming the country's energy system became one of the main points of the Chinese government, which tried to reduce the smog of the cities and reduce the concerns of citizens. This Five-Year Plan is based on a new policy: the so-called "Green Economy", which also aims to increase the competitiveness of the internal market. China therefore aims to lower water and energy consumption and reduce carbon emissions per unit of GDP by 15% and 18% respectively compared to 2015 levels. The achievement of this

objective could be possible thanks to the use of renewable energy and the creation of eco-sustainable infrastructures for the protection of the environment;

In addition to this, clear plans were set for the revaluation or elimination of inefficient and obsolete industries or factories, and for the reduction of excess capacity of production plants. The medium-term objective was to increase the production of renewable energy and to encourage the development of environmentally sustainable infrastructures with a reduced environmental impact.

Other important points that were dealt with in the 13th Five-Year Plan were: Competition in monopoly sectors (electricity, transport, public services, telecommunications); financial sector reform: more liberalization and creation of trading platforms for stocks and shares; internet: faster network speeds, implementation of Internet Plus and creation of services to promote e-commerce; opening up of financial markets: provision of services open to local and foreign individuals; abandoning the one-child policy; welfare reform: more social services, health care and the creation of structures dedicated to the elderly population; international cooperation: greater participation in supranational bodies, conclusion of new treaties, harmonization and coordination; energy production with reduced environmental impact: reduction of emissions and consumption, dismantling of inefficient units and creation of eco-sustainable plants; urbanization: improving the quality of life and promoting urban areas through more services and jobs. After the 13th Five-Year Plan, in 2021 the Chinese Government released the guidelines for the 14th Five-Year Plan.

Precisely, in March 2021, the delegates of the Chinese National People's Congress approved the 14th Five-Year Plan (中华人民共和国国民经济和社会发展第十四个五年规划) and the long-term strategy up to 2035. This Five-Year Plan sets out the main objectives and economic policy priorities for the next five years (2021-2025). The plan also indicates foreign policy priorities and provides indications to local governments on the type of investment projects to be implemented in the future. On the contrary, the long-term strategy to 2035 is less specific and is limited to affirming the desired goals for the next 15 years, in the hope of having completed the modernization process and having reached middle-income status. The 14th Five-Year Plan contains a set of 20 indicators that highlight the Chinese government's priorities and ambitions. A significant change, compared to the previous Five-Year Plan, is the failure to set out GDP growth targets.

While an annual growth target of 6.5% was set in the previous edition, the Fourteenth Five Year Plan simply states that annual expansion targets must be reasonable and set according to the circumstances. This does not mean that the Chinese government has renounced the growth targets, however, for 2021 they were set at 6% - but it is implied that those responsible for economic policy wish to have more room for maneuver to align their priorities according to the developments in the domestic and international situation. Science and technology are at the top of the priorities of the 14th Five-Year Plan which aims to improve China's technological capabilities in seven main pillars, reducing the country's dependence on foreign component supplies and supply chains.

Following the UNDP (United Nations Development Programme), a “*new development concept*” that combines “*sustained and healthy economic development*” with “*obvious improvements in quality and efficiency*” (section 1) is tackled. The aim is to “*achieve higher quality, more efficiency, more fairness, and more sustainable and safer development*”. This is an evolution from the previous Plan, where the aim was “*appropriate development*”, with economic development treated as “*central*”, and where the first of the “*major objectives*” was to “*maintain a medium-high rate of growth*”¹⁴³.

In this presentation of the new 14th Five Year-Plan, there is a list of key points for the goals set by China in this Five-Years time.

In particular, the key strategies are, as already mentioned, seven:

1. ***Innovation-led development and industrial modernisation***, including accelerated digitalisation and pressing on with market reforms to build a “*high-level socialist market economic system*” (sections 2, 3, 5 and 6);
2. ***Strengthening the domestic market and demand*** (section 4), with two out of the three chapters under the section on “*dual circulation*”;
3. ***Rural revitalization*** (section 7). Rural development and agriculture modernization have been long-time Government’s priorities, but this is the first FYP that deals with the concept of rural revitalization as introduced by President Xi in 2017 at the 19th National Congress of the Communist Party of China. The Plan introduces an integrated and holistic approach, aiming to link rural and urban development, a feature previously missing;

¹⁴³ China’s 14th five-year plan, United Nations Development Programme, Issue Brief, 2021.

4. **Improving people’s wellbeing** (section 8 on urbanisation, 9 on reducing regional disparities, 13 on human development and 14 on improving livelihoods). The 14th FYP closely follows past plans and builds on what has been achieved so far. Novelties concern the “healthy China” campaign – a direct consequence of the pandemic – along with more interventions on early childhood care and a stronger emphasis on the environmental sustainability of cities;
5. **Environmentally sustainable development:**
- The Plan includes much-awaited targets and guidelines on modernizing the industrial system, including the energy system, along with promoting green development (section 11). Compared to the 13th FYP, the number of binding environmental targets was reduced to five from 10. The share of non-fossil energy (including nuclear and hydropower) in primary energy consumption is now neither a binding nor indicative target, unlike in the 13th FYP. Overall, the targets are broadly in line with China’s current enhanced climate commitments. Their focus is on capping energy and carbon intensity per unit of GDP, rather than the level of emissions;
 - A comprehensive chapter on the marine economy (9.33). This FYP’s objectives put more emphasis on “harmony” between nature and human activities (with the inclusion of language like “sustainable” fishing, previously missing) versus the 13th FYP’s stronger focus on developing the marine economy and resources. There is also a shift from a domestic perspective to one that embraces enhanced global cooperation;
6. **Promoting international cooperation and engagements:** Section 12 focuses on China’s international engagements and cooperation. More on the subject is also scattered throughout the Plan in other thematic sections, such as the ones related to the marine economy, the environment or regional development. The main highlights are:
- Building a strong enabling business environment in China for foreign investments (12.40) and along the Belt and Road;
 - “Active participation in the reform and construction” of the global governance system;

7. *Supporting the national security system (section 15). Compared to the 13th FYP, the 14th FYP has introduced a separate section on national economic security which covers food, energy and finance security. Section 15 emphasizes self-sufficiency amid concerns over COVID-19 and other shocks. Key projects listed to address this issue include building food storage facilities, promoting the exploration and development of oil and gas, establishing industrial bases for coal-to-oil and gas conversion and developing power emergency response systems.*¹⁴⁴

The 14th Five-Year Plan perfectly represents the commitment of the Government in order to ameliorate its own circumstances, because is wide in scope and addresses all three pillars of development: economic, environmental and social.

The emphasis in particular is on green development (consumption, production, industrial system, agriculture, rural revitalization, urbanization, regional development and international engagements) and on innovation.

The term is repeated 180 times throughout the document, including technological innovation, financial innovation, policy innovation and institutional innovation, touching on all sectors of the economy and public services and, as it can be noticed from the discussion faced in this dissertation, innovation can be considered a synonym of development and sustainability in the majority of cases.

CONCLUSIONS

To conclude the above analysis, it is worth summarizing what the highlights of the research and the results obtained were.

The research focuses more on the existing relationship between FDI and sustainability and the main question to be answered through this thesis is: can FDI bring positive change to the host country in terms of environmental, social and economic sustainability or do they have more negative aspects than positive ones?

¹⁴⁴ All the list was cited from: China's 14th five-year plan, United Nations Development Programme, Issue Brief, 2021.

As already mentioned in this dissertation's introduction, although China is still a destination for many Foreign Direct Investments, the situation, with the advent of the pandemic, has changed.

Since the impact of the Pandemic on FDI in general was mentioned in the introduction, it is considered important to briefly mention what changes in sustainability COVID-19 has brought to China in the conclusions.

Some scholars contend that the drop in CO2 emissions is only momentary: as it does not reflect any significant structural change in the economic, transportation, or energy systems, it will be difficult to avoid the environmental rebound impact after Covid-19 is over. At the same time, the widespread production and sale of Covid-19 protection equipment, such as face masks, has given rise to new types of pollution¹⁴⁵.

The results of the survey conducted by Zhang et al. (2020) show that, during the pandemic and subsequent years, companies with mixed markets have given priority to social sustainability and environmental sustainability.

However, it needs to be emphasized that, for all types of businesses, sizes and markets, economic sustainability has clearly stood out as the highest of the three dimensions of post-Covid-19 sustainability. This validates the likelihood of post-pandemic sustainability and environmental rebound effect, which some scholar states are already occurring in China, and leaves environmental sustainability as the last considered¹⁴⁶.

To sum up, regarding the issue of the sustainability of investments after the occurrence of the pandemic, it could be stated that, after the studies conducted over the last two years, the pandemic situation seems to have affected the Chinese inward FDI only in the short-term¹⁴⁷. Sustainability, as can be noticed from the policies that the government is adopting, is still in the long-term plans of the Country.

In order to understand the results achieved throughout this dissertation, it is necessary to go over the topics and highlights of the research carried out.

¹⁴⁵ ZHANG, Dongyong, HAO, Mengge, MORSE, Stephen, *Is Environmental Sustainability Taking a Backseat in China after COVID-19? The Perspective of Business Managers*, Sustainability, 2020.

¹⁴⁶ *Ibidem*

¹⁴⁷ LONG, Hai, LI, Wenwei, *Does COVID-19 Pandemic Impact on China's Economy Structure and Sustainability of Deep Economic Determinants?*, International Journal of Economics and Financial Issues, 2021.

Regarding the first chapter, following an initial general analysis to approach the topic of Foreign Direct Investment with more information, a review of both international and Chinese literature was carried out to understand how the relationship between FDI and sustainability is perceived.

In particular, it is generally argued that an essential point for FDI to be beneficial to a host country is that the government must enact effective regulation and investors must bear in mind various precautions.

From the point of view of the benefit of FDI, scholars state that in most cases they bring positive changes to the host country, especially if this is a developing country, as they could bring innovation from their countries, but at the same time, they could have consequences in terms of environmental impact.

Regarding the particular case of China, the papers and research of the scholars considered present different outcomes: some argue that FDI has contributed to the growth of the green economy, while others state that FDI hinders the development of China's green economy by bringing a negative result.

It is important for research purposes to consider the two sides of the coin.

On the one hand, it is stated that FDI can promote the efficiency of green innovation by bringing in advanced technology and financial support for research and development, while environmental regulations will guide FDI in a more rational manner, thus fully supporting the efficiency of green innovation, and on the other hand that FDI has a significant inhibitory effect on the country's green total factor productivity, which verifies the "pollution haven" hypothesis, which has certain regional heterogeneity, while the inhibitory effect of FDI on green total factor productivity in the central and western inland regions is more obvious.

Another important aspect that emerged from the literature review carried out in the first chapter is that to achieve sustainable development, it is necessary for China to strengthen environmental protection measures, reducing the disproportionate demand and consumption of resources that end up causing environmental pollution, moreover, strengthening the cooperation among provinces can help improving control on green development and environmental pollution.

The first, introductory chapter of this research, concludes with an in-depth look at the "*Pollution Haven*" hypothesis and the Porter Effect. The choice to delve into this aspect

stemmed from the debate among scholars as to whether one or the other occurs in China. Until a few years ago, the former hypothesis could be thought of as occurring in China because many investors chose the country precisely because of its lax environmental regulations, whereas now, in recent years, precisely because of the government's efforts, it can be said that this hypothesis no longer occurs. In recent years, one could discuss more about the Porter Effect. The Porter Effect states that Foreign Direct Investment bring a more advanced and therefore less polluting technology and that companies in rich countries instead favor stricter environmental rules because they promote innovation.

As for the second chapter, the chapter on the development and history of FDI in China, on the most popular ways of entering China for foreign investors, and on the industries in which foreign investors invest the most, the interesting part, despite the fact that China's economic history is full of salient and interesting points that were just mentioned briefly to present a more complete picture along with the research, was to analyze the types of investments made and to notice how, over the years, the most attractive sectors for foreign investors have changed.

In general, it can be said that foreign investors tend to choose a completely new entry mode of investment to enter the host country market in countries or regions with rapid construction, rapid economic growth and fluctuating market demand such as greenfield investments, while investors choose cross-border M&A entry mode to enter the host country market in countries or regions with slow construction, slow economic growth and stable market demand.

As far as China is concerned, the most commonly used method of entry is greenfield investment. This is because after China's opening-up reform, the economy grew rapidly for a long time and the pace of construction was fast, so foreign investors tend to enter through this type of investment. This type of investment introduces more advanced technology and managerial experience into foreign companies, protects economic and industrial security more effectively and does not risk the takeover of famous brands. For this reason, the government has adopted a policy of controlling foreign investment in mergers and acquisitions, encouraging, or even forcing foreign investors to enter the Chinese market through greenfield investments.

The last part of the chapter deals with the sectors in China where foreign investors decide to invest the most.

Immediately after the economic reform, the choice of which sector to invest in fell more on the primary sector, but with the passing of the years and the constantly changing economic development, the situation has certainly changed.

In recent years, although it was thought that investments would be directed mainly to the secondary sector, the trend has changed completely, leading to a significant increase in the service sector (i.e. the tertiary sector). This is very important because, through the tertiary sector, not only can companies manage their resources better and be more competitive, but above all, this growth in the tertiary sector could be a great advantage for China when it comes to sustainability.

In contrast to the secondary sector, which in most cases comprises highly polluting and high-consumption industries, the tertiary sector tends to consume less energy and emits less pollutants, so it will have a positive impact on the development of the local green economy.

Initially, China did not attribute so much importance to the tertiary sector, but with time they realized that this sector is to be preferred as it can bring a high level of technology and innovation within the country.

As far as the third chapter is concerned, as the purpose of this dissertation is to analyze if the consequence of the FDI brings positive externalities or negative externalities to China, for this, the effects of FDI on the Chinese economy, environment and society were analyzed.

To be brief and summarize the analysis, it can be stated that the positive elements of FDI on the economy are: the introduction of new foreign capital, which certainly helps the country to fill the gaps; high technological innovation, which is the key to the whole discussion in this thesis, because through it can certainly be achieved a satisfactory level of sustainability and, the consequence is that the country is moving more and more towards a green economy; advanced management experience that, consequently, plays a huge role in promoting the host country's economic development and technological progress. The decision to develop a section on the technological spillover brought by FDI

in China comes precisely from the fact that technology is very important and is one of the most essential points for FDI to achieve sustainability goals.

It is crucial for a developing country to attract MNEs because they bring high technology and R&D methods to the country, from which local companies can then take inputs to improve.

Regarding the impact of FDI on the environment, it can be posited that the inflow of FDI has prompted the Chinese government to improve the level of environmental regulation, and strict environmental regulation has continuously raised the environmental threshold for foreign investment. These two aspects jointly promote the improvement of green economic efficiency.

Again, technology plays a very important role. Although in the initial phase of opening, companies moved their most polluting factories to China due to the mild regulation thus bringing about the “*pollution haven*” hypothesis, in recent years foreign companies have developed a high level of technology and innovation. This aspect allows, together with the government's effort to promulgate laws and policies for environmental protection and control, not to burden the environment excessively, worsening it more and more, indeed, high-ranking technologies, in most cases, protect this aspect that has now become a priority in the everyday life of countries. The production technology MNEs use is not only based on the current management system, but also on the development of the future management system, so they focus on transforming existing technologies or introducing new environmental protection technologies to alleviate environmental pollution.

The last aspect addressed in this chapter, presents the impact FDI has on society. The large amount of FDI inflow has promoted the improvement of residents' income and the transformation of employment structure, for example, through the introduction of foreign capital and technology, foreign enterprises can also improve the added value and competitiveness of their products, the local government's tax revenue can be increased, public infrastructure has been improved, people's livelihood issues have been solved, and social stability is consolidating more and more.

However, there are also downsides, such as the crowding-out effect, which is reflected in the fact that FDI increases the capital of companies and creates employment conditions, but at the same time causes state-owned enterprises and other business units to reduce the number of employees, leading to redundancies.

In general, however, despite this, FDI brought a positive trend in both income and employment growth.

To conclude the analysis of this thesis, it has been chosen to briefly elaborate on what policies and laws or regulations have been instituted by the government to address the issue of FDI and sustainability in general. The fourth chapter presents several paragraphs in which China's plans and goals for the coming years are presented. It is considered interesting to address these topics in order to understand the long-term importance of sustainability in the country.

In particular, topics such as: Environmental Protection Law, Law of the People's Republic of China on Foreign Investment, MOFCOM Negative List of Foreign Investments, MADE IN CHINA 2025 and 13th and 14th Five-Year Plans.

The first two laws presented, with their amendments and changes over the years, fully represent the government's efforts to improve its system, especially the introduction of the Foreign Investment Law represents the effort to regulate inbound investment in order to balance the country and only take advantage of the positive aspects of investment. This law ties in perfectly with the negative investment list provided by the Ministry of Commerce. The list, in fact, presents a number of investments that the government discourages both because they do not benefit the economy and to ensure that the investments brought into the country are high quality investments.

As far as the MADE IN CHINA 2025 plan is concerned, it can be said that this is precisely in line with the concept of sustainability, in fact it can be said to propose a technological revolution that will certainly favor sustainability in many respects given the high level of innovation.

On the other hand, looking at the five-year plans, one can see that from 13 to 14 there are various changes, and here too, one can briefly summarize by saying that their aim is to guide social, political and economic development for the duration of 5 years. Both are based on a new policy: the so-called “Green Economy”, which also aims to increase the competitiveness of the internal market. The achievement of the “Green Economy” can be possible thanks to the use of renewable energy and the creation of eco-sustainable infrastructures for the protection of the environment.

Above all, the 14th Five-Year Plan represents the government's willingness to improve on sustainability as it is wide in scope and addresses all three pillars of development: economic, environmental, and social and its emphasis in particular is on green development and on innovation.

After briefly outlining the results of this dissertation, it can be said that, in reality, there are many possibilities that the sustainable aspect of the country can be improved through FDI, mainly due to the technology that this brings, which certainly allows for more and more innovation. Of course, there are also negative aspects of the large inflow of investments into China. Certainly, it can be confirmed that the government's role in always updating its goals and increasingly including green development in its plans is also essential, both by continuing to change its regulations and by monitoring incoming investments to ensure that they mainly bring benefits to the country.

Awareness of the importance of environmental sustainability has certainly grown over time.

As environmental restrictions increase, environmental sustainability is consequently encouraged. If these rules and regulations had been implemented earlier, the negative aspects that FDI brings to the level of sustainability could have been further mitigated.

An important consideration could be to make use of the Chinese experience as an example to improve the future of developing countries, such as African countries, in which China leads a massive number of Outward FDI.

In some ways, therefore, it is important that emerging economies, or those that have had a fast growth process in recent years, take as example countries that changed their perspectives and implemented solutions to become more sustainable or, at least, they should begin to consider sustainable development as fundamental, so as not to create irreparable or highly polluting situations as happened in the early stages of China's development.

BIBLIOGRAPHY

- ADEEL-FAROOQ, R. M., et al., *Improving the environment begins at home: Revisiting the links between FDI and environment*, Energy, Volume 215, 2021.
- AMBEC, Stefan, BARLA, Philippe, *A theoretical foundation of the Porter hypothesis*, Economics Letters, Volume 75, Issue 3, 2002.
- AUST, Viktoria, MORAIS, Ana Isabel, PINTO, Inês, *How does foreign direct investment contribute to Sustainable Development Goals? Evidence from African countries*, Journal of Cleaner Production, Volume 245, 2020.
- AYAMBA, Emmanuel C., et al., *The impact of foreign direct investment on sustainable development in China*, Environmental Science and Pollution Research, 2020.
- Background of Heterogeneous Environmental Regulation*, China Academic Journal Electronic Publishing House, 2020.
- BARBIERI, Elisa, DI TOMMASO, Marco R., POLLIO, Chiara, RUBINI, Lauretta, *Getting the specialization right. Industrialization in Southern China in a sustainable development perspective*, World Development, Volume 126, 2020.
- BILAL, Ahmed, et al., *Internationalization of emerging economies: Empirical investigation of cross-border mergers & acquisitions and greenfield investment by Chinese firms*, Journal of Innovation & Knowledge, Volume 7, Issue 3, 2022.
- BLOMSTRÖM, Magnus, KOKKO, Ari, *The impact of foreign investment on host countries: a review of the empirical evidence*, Policy Research Working Paper 1745, 1996.
- BLONIGEN, Bruce A., *A Review of the Empirical Literature on FDI Determinants*, Atlantic Economic Journal, 2005.
- BLONIGEN, Bruce A., *Firm-Specific Assets and the Link between Exchange Rates and Foreign Direct Investment*, The American Economic Review, vol. 87, no. 3, 1997.
- BROADMAN, Harry, SUN, Xiaolun, *The distribution of Foreign Direct Investment in China*, World Bank publications, 1997.
- BROUTHERS, Keith, et al., *Real Options, International Entry Mode Choice and Performance*, Journal of Management Studies, 2008.
- CAO, Yaoyuan, et al., *FDI 对中国环境的影响* (The impact of FDI on China's environment), www.qikan.com.cn, 2015.

- CAVES, Richard E., *Spillovers from Multinationals in Developing Countries: the Mechanisms at Work*, William Davidson Institute Working Papers Series 247, William Davidson Institute at the University of Michigan, 1999.
- CHEN, Honglei, ZOU, Xiaorong, CHEN, Qiufeng, *Export-oriented Economy & Environmental Pollution in China: the Empirical Study by Simultaneous Equation Model*, Energy Procedia, vol. 5, 2011.
- CUI, Fan, WU, Songbo, 《中华人民共和国外商投资法》与外商投资管理新体制的建设 (The Foreign Investment Law of the People's Republic of China and the Construction of a New System for Foreign Investment Management), International Trade Issues No. 4, 2019.
- CUI, Fan, WU, Songbo, 《中华人民共和国外商投资法》与外商投资管理新体制的建设 (The Foreign Investment Law of the People's Republic of China and the Construction of a New System for Foreign Investment Management), International Trade Issues No. 4, 2019.
- DEAN, Judith, et al., *Are foreign investors attracted to weak environmental regulations? Evaluating the evidence from China*, Journal of Development Economics, 2009, citing Bhagwati, J., 2004.
- FARISELLI, Patrizia, *La Cina nel Mercato Globale* (China in the global market), Università di Bologna, 2020.
- GARSOUS, Grégoire, KOZLUK, Tomasz, "Foreign Direct Investment and The Pollution Haven Hypothesis: Evidence from Listed Firms", OECD Economics Department Working Papers, No. 1379,
- GILROY, Bernard M., LUKAS, Elmar, *The choice between greenfield investment and cross-border acquisition: A real option approach*, The Quarterly Review of Economics and Finance, Volume 46, Issue 3, 2006.
- GROSSMAN, Gene M., KRUEGER, Alan B., *Economic growth and the environment*, The quarterly journal of economics, 1995.
- HAISHENG, Yang, et al., *The impact on environmental kuznets curve by trade and foreign direct investment in China*, Chinese Journal of Population Resources and Environment, 2005.
- HENNART, Jean-François, *Transaction Cost Theory and International Business*, Journal of Retailing, Volume 86, Issue 3, 2010.

- HOU, Qing, *外商直接投资对我国产业结构的影响* (The Influence of Foreign Direct Investment on China's Industrial Structure), China Academic Journal Electronic Publishing House, 2020.
- HU, Xin, *外国直接投资对中国经济增长的效应分析* (Analysis of the Effect of Foreign Direct Investment on China's Economic Growth), China Academic Journal Electronic Publishing House, 2016.
- HU, Xueping, XU, Pei, *FDI 质量特征对中国经济高质量发展的影响研究* (The Impact of Quality of FDI on the High-quality Economic Development), International Trade Issues, Issue 10, 2020.
- HU, Xueping, XU, Pei, *FDI 质量特征对中国经济高质量发展的影响研究* (The Impact of Quality of FDI on the High-quality Economic Development), International Trade Issues, Issue 10, 2020.
- JAFFE, Adam B., PALMER, Karen, *Environmental Regulation and Innovation: A Panel Data Study*, The Review of Economics and Statistics, vol. 79, no. 4, 1997.
- JAHANGER, Atif, *Influence of FDI characteristics on high-quality development of China's economy*, Environmental Science and Pollution Research, 2021.
- JIN, Zhenzhu, *外商投资对中国环境污染的影响分析与对策* (Analysis and Countermeasures of the Impact of Foreign Investment on China's Environmental Pollution), Foreign Economic and Trade University, 2009.
- JING, Zhang, XIAOLAN, Fu, *FDI and environmental regulations in China*, Journal of the Asia Pacific Economy, 2008.
- KENDERDINE, Tristan, *China's Industrial Policy, Strategic Emerging Industries and Space Law*, Asia and The Pacific Policy Studies, 2017.
- Lehnert, Kevin, et al, *FDI Inflow and Human Development: Analysis of FDI's Impact on Host Countries' Social Welfare and Infrastructure*, Thunderbird International Business Review, 2013.
- LI, Guanglong, FAN, Xianxian, *贸易开放、外商直接投资与绿色全要素生产率* (Trade openness, foreign direct investment and green total factor productivity), China Academic Journal Electronic Publishing House, 2019.

- LI, Ling, *China's manufacturing locus in 2025: With a comparison of "Made-in-China 2025" and "Industry 4.0"*, Technological Forecasting and Social Change, Volume 135, 2018.
- LI, Shanmin, LI, Chang, *跨国并购还是绿地投资? FDI 进入模式选择的影响因素研究* (Cross-border M&A or Greenfield Investment: What Affect Choices between the Two FDI Entry Modes?), China Academic Journals Electronic Publishing House, 2013.
- LI, Wenhong, CAO, Wan Lin, *FDI、环境规制与区域绿色创新效率* (FDI, Environmental Regulation and Regional Green Innovation Efficiency), Statistics and Decision journal Publisher, 2020.
- LI, Ling, CHEN, Ying, *Impact on Society Stability from FDI in Xi'an City*, School of Geography and Tourism, Shanxi Normal University, Xi'an, 2018.
- LI, Ling, CHEN, Ying, *Impact on Society Stability from FDI in Xi'an City*, School of Geography and Tourism, Shanxi Normal University, Xi'an, 2018.
- LIAO, Bao Zhi, *The Present Situation, Problems and Countermeasures of FDI in China*, Shanghai Academy of Social Sciences, 2021.
- LIAO, Run Dong, *Influence of Foreign Direct Investment on Host and Home Nations' Economy*, Zhejiang Institute of Mechanical & Electrical engineering, Hangzhou, 2014.
- LIN, Minshu, *新中国 60 年经济增长方式的历史演变及其展望*(The Historical Evolution of the Economic Growth Pattern in New China in the Past 60 Years and Its Prospects), Xiamen University Institutional Repository, 2009.
- LIU, Kui, LIN, Boqiang, *Research on influencing factors of environmental pollution in China: A spatial econometric analysis*, Journal of Cleaner Production, Volume 206, Page 363, 2019.
- LIU, Shenglong, ZHANG, Penglong, *Foreign Direct Investment and air pollution in China: evidence from the global financial crisis*, School of public policy and management, Tsinghua University, Beijing, 2022.
- LONG, Hai, LI, Wenwei, *Does COVID-19 Pandemic Impact on China's Economy Structure and Sustainability of Deep Economic Determinants?*, International Journal of Economics and Financial Issues, 2021.

- LUO, Yan, TAO, Yu, *F D I 对东道国就业的影响*(Effect of FDI on employment of host country), Journal of Chongqing University of Technology (Social science), Vol 24, No. 3, 2010.
- LV, Ping, CURRAN, Louise, SPIGARELLI, Francesca, BARBIERI, Elisa, *One country, many industries: Heterogeneity of Chinese OFDI motivations at meso level*, China Economic Review, Volume 69, 2021.
- MA, Yuan, *督政与简政的“平行渐进”：环境监管的中国逻辑* (Parallel Gradualism: Institutional Evolution with Chinese Style in Environmental Regulation), China Academic Journal Electronic Publishing House, 2021.
- NARULA, Kapil, *'Sustainable Investing' via the FDI Route for Sustainable Development*, Procedia - Social and Behavioral Sciences, Volume 37, 2012.
- Patterson N, *et al.*, *Foreign Direct Investment, Trends, Data Availability, Concepts, and Recording Practices*, International Monetary Fund, 2004.
- PEI, Changhong, *The Changing Trend of FDI Patterns in China*, The Chinese Economy, 2001.
- SAUVANT, Karl P., MANN, Howard, *Making FDI More Sustainable: Towards an Indicative List of FDI Sustainability Characteristics*, The Journal of World Investment & Trade, 2017.
- SHAUKAT, Ali, WEI, Guo, *Determinants of FDI in China*, Journal of Global Business and Technology, 2005.
- SUN, Peng, *et al.*, *Energy efficiency comparison amongst service industry in Chinese provinces from the perspective of heterogeneous resource endowment: Analysis using undesirable super efficiency SBM-ML model*, Journal of cleaner production, 2021.
- WANG, Zhu Jun, *et al.*, *Influence of Two — way FDI on Green Economy Efficiency under the*
- WEI, Ying, *The effect of FDI on employment in China*, Digital Repository, Iowa State University, 2013.
- XIAO, Chunhuan, *et al.*, *OFDI Entry Modes and Firms' Innovation: Evidence from Chinese A-Share Listed Firms*, Sustainability 13, no. 14, 2021.
- XIE, Jianguo, *Technical Spillovers of Foreign Direct Investment in China: A Study Based on Provinces Panel Data*, China Economic Quarterly, Vol. 5, No. 4, 2006.

- XIE, Jianguo, *Technical Spillovers of Foreign Direct Investment in China: A Study Based on Provinces Panel Data*, China Economic Quarterly, Vol. 5, No. 4, 2006.
- XIN, Hongyan, et al., *FDI 对中国经济增长影响的实证分析* (Empirical Analysis of Impact of FDI on China's Economic Growth), Journal of Beihua University, 2016.
- XUE, Huifang, WANG, Guoxia, *外资驱动绿色经济发展的机制与对* (Mechanisms and implications of foreign investment in driving green economy development), China Academic Journal Electronic Publishing House, 2019.
- XUE, Huifang, WANG, Guoxia, *外资驱动绿色经济发展的机制与对* (Mechanisms and implications of foreign investment in driving green economy development), China Academic Journal Electronic Publishing House, 2019.
- YANG, Hong-li, *FDI 影响中国经济增长的内在机制* (The Impacts of FDI on China's Economic Growth), Journal of Shanghai University of International Business and Economics, 2017.
- YU, Jianxia, *Re-examination of "Pollution Haven" or "Pollution Halo" Effect on Foreign Direct Investment —Evidence from "Two Control Zones" Policy in China*, Advances in Economics, Business and Management Research, volume 106, 2019.
- YU, Ruicheng, *异质性 FDI 对我国自然环境的影响* (The impact of heterogeneous FDI on my country's natural environment), Shandong University, 2018.
- ZHAI, Chaoying, WANG, Leiqun, *疫情改变了我国 FDI 流入的影响因素吗?* (Has the Epidemic Changed the Factors Affecting FDI Inflow in China?), Contemporary Financial Research, Issue 2, 2022.
- ZAJAC, Edward, OLSEN, Cyrus, *From transaction cost to transactional value analysis: implications for the study of interorganizational strategies*, Journal of Management Studies, 1993.
- ZHANG, Dongyong, HAO, Mengge, MORSE, Stephen, *Is Environmental Sustainability Taking a Backseat in China after COVID-19? The Perspective of Business Managers*, Sustainability, 2020.
- ZHANG, Kevin Honglin, *The Role of FDI in China's Export Performance*, Illinois state University, 2006.
- ZHANG, L., He, G., Mol, A. P., *China's new environmental protection law: A game changer?*, Environmental Development, 2015.

ZHANG, Ming, PATTON, Dominique, *China releases five-year green development plan for industrial sectors*, Reuters, 2021. <https://www.reuters.com> (last consultation on: 03/06/2022)

ZHANG, Xiaoqiang, *Thoughts on Foreign Investment Law of the People's Republic of China and China-US Two-way Investment*, Globalization No. 9, 2019.

ZHAO, Aiwu, et al., *Environmental taxes, technology innovation quality and firm performance in China—A test of effects based on the Porter hypothesis*, Economic Analysis and Policy, Volume 74, 2022.

ZHONG, Yi, *外国直接投资对中国就业效应的实证分析*(An Empirical Analysis of the Effects of Foreign Direct Investment on Employment in China), China Academic Journal Electronic Publishing House, 2019.

SITOGRAPHY

China's 14th five-year plan, United Nations Development Programme, Issue Brief, 2021.
The Social Impact of Foreign Direct Investment, Organisation for Economic Co-operation and Development, Policy Brief, 2008.

China's 14th five-year plan, United Nations Development Programme, Issue Brief, 2021.
FDI Qualities Indicators 2022, OECD, 2022.

Foreign Investment Guide of the People's Republic of China, Ministry of Commerce of the People's Republic of China, 2021 version.

OECD Publishing, Paris, 2017, <https://doi.org/10.1787/1e8c0031-en> (last consultation on: 02/06/2022).

Organization for Economic Co-operation and Development, <https://www.oecd.org/> (last consultation on: 09/06/2022).