

## IS FOREIGN DIRECT INVESTMENT A DANGER? FOREIGN DIRECT INVESTMENT AND THE ENVIRONMENT

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**Abstract:** *Globalization and trade liberalization are the features of contemporary world's political economy. Large numbers of multinational companies are relocating their firms in different countries through Foreign Direct Investment (FDI). Competition to receive FDI among countries is growing and countries use several means to attract foreign investors to produce export products. Providing good infrastructure, cheap labor and good governance in host countries are among the central factors in attracting companies (MNCs). Scholars argue that countries can also lower environmental regulations to attract investors from strictly regulated countries and this indeed determines the location decision of particularly pollution intensive industries. However, the empirical validity of this hypothesis is much contested and there are many disagreements among scholars. With careful review of literature, I conclude that absence of international consensus upon environment and increased liberalization would in fact lead to chilling effect on environmental regulation internationally.*

**Key words:** Globalization, Direct Investment, Environmental Regulations, Liberalization

### Introduction

Increased liberalization of trade and flow of capital in the world led FDI (Foreign Direct Investment) to be very significant source of GDP (Gross Domestic Product) growth for countries. Hence, countries are competing to be the most attractive places for multinational companies' investment in many ways. On the one hand, provisions of less expensive labor force, good infrastructures, and good governance/bureaucracy are at the center of the competition among nations to attract foreign investors. On the other hand lenient environmental regulation is seen as a means of attracting investors and particularly those investing on environmentally damaging dirty industries. The "Pollution Haven Hypothesis" is a prominent argument about the competition among countries to attract foreign investors by having less regulation for environment. According to this hypothesis, countries compete to be less costly to invest in, by lowering their environmental regulations and taxes, which the economists call "race to the bottom". There are arguments and counter arguments about this hypothesis in the literature and it's important to look in to it in detail so as to understand why these hypotheses does/not work. Although, some scholars prove that it does not work "empirically", many others argue that there is no reason why countries do not compete to be

very attractive in whatever way they can, given the absence of international consensus about the environment and the liberalization of trade.

In this paper I reviewed the various views of different scholars about the relationship between Foreign Direct Investment (FDI) and environment. The first part of the paper is an introductory explanation of the relationship between the environment and foreign direct investment. This is followed by the main argument about the negative effect of FDI on the environment. The third part will be a counterargument from the proponents of free trade (liberalization) against the negative views of foreign direct investment. The last part is discussion of the strengths and limitations of both views from different authors' and my point of view followed by a short conclusion.

### **Relationship between FDI and Environmental Regulations**

Different arguments have been made about the relationship between environmental regulations and the flow of capital in the form of Foreign Direct Investment. Do globalization and free trade negatively affect environmental regulations by promoting competition for lower stringency in environmental regulation ("*race to the bottom*")? Or does globalization affect environment positively by promoting stringent environmental regulation in host countries known as "the bottom rise" (Wheeler, 2001) or "pollution halo" (Gray, 2002) effect? These are important questions in investigating the relationship between the flow of Foreign Direct Investment and its effect on the environment. What does "race to the bottom" mean? And what do we mean by "rise of the bottom"?

Given the fast globalization pattern and free international flow of capital, multinational companies are investing in their countries of preferences. The location of industries can be determined by several factors such as availability of inexpensive labor force, quality of infrastructure, good governance, availability of natural resource and other related factors in host countries. Scholars also assert that, countries (and particularly poor countries) may use environmental regulation as an incentive to attract foreign investors. That is, countries may compete to lower their standard of environmental regulation to attract foreign investors and thereby move towards lowering international stringency of environmental regulation. This termed as "race to the bottom" (Dasgupta et al., 2002; Dean et al., 2005 ; Gray, 2002).

On the other hand, some scholars and particularly those advocators of free trade see the effect of FDI as positive and leading countries to raise their environmental quality. The argument on this side is that, FDI raises the stringency of environmental regulations of poor countries by improving their economic capability. This is called "the bottom rise" (Cole et al., 2006; Wheeler, 2001) or "pollution halo" (Gray, 2002) phenomena. Wheeler argues that "the poorest societies improve their environmental quality as investment increases employment and income". By this he means foreign direct investment helps societies to improve their capacity to avoid environmental problems.

The varying views about the effects of Foreign Direct Investment on environment can be grouped in to three categories. The first group is the proponents of "Pollution Haven

Hypothesis” in which there is a fierce debate about the negative effect of FDI on environmental regulation. The “race to the bottom” model is the most contested part of this argument (Bommer, 1999; Cole et al., 2006; Dasgupta et al., 2002; Dean et al., 2005 ; Lu, 2010; Mabey & McNally, 1999). The second is the group which views FDI’s impact as positive and advocate for expansion of foreign investment to improve environmental quality of poor societies. Finally, a third category in which I label myself as well is the group which looks in-depth and beyond investment on environmentally damaging manufacturing industries when dealing with FDI’s impact on the environment. The following sections of the paper will be about these positions.

### **How does FDI negatively affect environmental regulations?**

Although it is highly advocated and promoted in recent decades, Foreign Direct Investment is also criticized for its environmental impacts. Several studies have identified the conditions under which FDI can negatively affect the environment. One of the most important results of these studies is that of foreign direct investment negatively affects the environmental quality by lowering the standards/regulations on environment. The increased demand for FDI and competition to attract foreign investors leads countries to lax their environmental regulation. In other words, poor countries lower their environmental regulation to attract investors from countries where there is stringent regulation and high tax for pollution. As a result those countries with lower environmental regulation will have high agglomeration of dirty industries which in turn affect their environment. According Ederington et al. (2004), free trade means greater specialization and concentration of certain type of products in some countries which in turn means greater concentration of polluting industries in some countries and cleaner industries in others. This is termed as “pollution haven hypotheses”. The pollution haven hypothesis is one of the most contentious and highly debated predictions in the international political economy in relation to environment and trade (Taylor, 2005). Pollution Haven hypothesis refers the idea that investors will choose to locate their industries in places where there is cheaper and more efficient production in terms of regulatory requirements(Gray, 2002; Taylor, 2005). The relocation of Californian tanneries to Mexican free trade zones is example of multinational companies’ choice of location to use lenient regulations in Mexico and relatively stringent environmental regulations in the US and Canada (Taylor, 2005).

Dean et al. (2005 ) explained the main argument in the pollution haven hypothesis is as ‘poorer countries my undervalue environmental damage in order to attract more foreign direct investment which in turn could generate a “race to the bottom” with all countries lowering environmental standards in order to attract and retain investment’.. According to this argument, there is no reason why countries do not use environmental regulation to attract investment as they do with their resource or labor. On the other hand, Bommer (1999) explains the hypothesis in relation to environmental regulation and competitiveness of firms with foreign competitors. Firms in countries with stricter environmental regulation face difficulty to compete with firms producing in countries with less strict environmental regulations due to increase in the cost of production, which finally lead firms to relocate their plant to countries with lenient regulations. He used the term “strategic relocation” to

explain the reason why multinational companies relocate their firms and relates relocation with trade liberalization. Trade liberalization increases the probability of strategic relocation because it intensifies competition which lead firms to loses of market share and decline in income. Thus, when environmental regulation are made even very slightly stringent, the already weak firms(already hit by liberalization) fail to afford cost of clean technology (cost of pollution abatement) and make strategic capital flight to poorer countries where there is no environmental regulation and fierce competition(Guoming et al., 1999). As a result, governments in high income countries face a challenge of rising capital out flaws and they start relaxing their environmental standards. Nevertheless, this is fruitless effort because the poorest countries have no environmental standards at all. This finally leads to “race to the bottom” in which all countries converge to the “hellish pollution levels” (Bommer, 1999; Dasgupta et al., 2002; Wheeler, 2001).

A clearer example of a pollution haven hypothesis based study comes from Jorgenson (2006) in which he criticizes foreign capital penetration as environmentally damaging for developing countries. Based on analysis of empirical data from 53 countries he found that capital penetration in the manufacturing sector affects growth in organic water pollution intensity in poor countries, whereas the effect is insignificant in developed countries. Hence, level of development has significant effect on the extent to which capital penetration effect the environment. This could be due to the higher standard of environmental regulation in developed countries and a relatively lower in low income countries which result in the agglomeration of dirty industries in the latter group. Other reasons can include Clapp (1998)'s point that multinational companies could be employing less clean technology in developing countries and a relatively cleaner technology in high income countries. According to Jorgenson foreign capital has built-in incentive to ignore environmental externalities in favor of maximizing profit(Jorgenson, 2006, p. 726).

The nature of multinational firms also highly matters according to Gray (2002). Race to the bottom according to Gray happens particularly in Export Processing Zones, where governments exempt requirements such as taxes, tariffs and give institutional duty free status to foreign firms engaged in exports. Governments in poorer countries establish Export Processing Zones (EPZs) in which foreign investors are exempted from certain requirements including loose environmental regulations. This promotes „race to the bottom“(Gray, 2002, p. 309). List and Co (2000) also attested that, difference in stringency of environmental regulation will inevitably result in flight of capital and affect location of MNCs firms.

As a solution to racing to the bottom crisis, proponents of the “pollution haven hypothesis” recommended a higher and globally uniform environmental standard of regulation. Tariffs and other trade restrictions should be used as means of neutralize the cost advantage of countries which are unwilling or unable to enforce the universal standards. Governments of less-developed countries should reconsider the impacts of foreign investment and pursue domestic policies and programs which held accountable transnational firms for their environmental damaging practices (Jorgenson, 2006). Bommer

(1999) also suggests the importance of strong environmental interest groups to avoid strategic relocation of multinational firm by lobbying the use of cleaner technology instead of strategic relocation from stringent environmental regulations in developed countries.

Jorgenson (2006) suggest as „austere form of regulation can be more successful at international level. Clapp (1998) also suggests several measures to discourage flow of dirty industries to low income countries. First, political opposition by tightening and enforcing environmental regulations in developing countries either by individual or by setting global standards will be effective. However, he admits that this measure could be very unpopular among industrial sector at global level and developing country governments. Second, disclosing the hazardous effects of dirty industries to poor communities where MNC wish to locate. This is also unpopular among governments and MNCs.

### **Deconstruction of the “pollution Haven Hypothesis”**

Several scholars and particularly those proponents of free trade have strongly criticized this hypothesis for being empirically less valid. They argue that the „pollution haven hypothesis” has only an air plausibility and is empirically flawed. Dasgupta et al. (2002) argue that reduction of environmental regulation is not substantial incentive compared to the other location incentives faced by businesses to lead them relocate their firms. Furthermore, Dasgupta and his associates argue that, imports by developing countries from high income countries have been more pollution-intensive than their exports to the developed countries in recent years. They explained that pollution havens can happen in extreme cases as in the 1970s when OECD countries tightened their environmental regulation with no countervailing change in the developing countries. In this case the regulatory cost was significant to lead multinational companies relocate their plants to developing countries. However, this has happened only for short time until poor countries narrow the gap by introducing stricter environmental regulation, to halt the flow of polluting industries through regulatory means.

Wheeler (2001) identified five major problems with the “race to the bottom model”. First, he shares Dasgupta and associates argument that, pollution control is not critical cost factor for most private firms to lead them decide location based on it. Other factors such as abundance of natural resource and inexpensive labor, good governance and distance to international market are more important than regulatory issues to determine location decision for multinational companies. Second, the model view poor people as passive and irrational who only seek job and capital at the expense of their environment. Wheeler cited examples of situation in which local people resisted against environmental destruction by foreign companies. He stated “...low income communities penalize dangerous polluters even when formal regulation is weak or absent” to emphasis the invalidity of the pollution haven hypothesis’s view about people(p. 232).

Third, rising income strengthens regulation (i.e. countries regulate pollution more strictly as they get wealthier). Hence, FDI helps countries to get wealthier which in turn lead them to regulate their environment. This is similar idea to environmental Kuznets curve’s

idea about economic development and the environment. Environmental Kuznets curve according to Dasgupta et al. (2002) shows an inverted U relationship between environmental pollution and economic development. At the beginning of industrialization people are more concerned about jobs and employment than environmental qualities which result in rising pollution level but this changes when income rises and society start to value clean environment and countries start to strengthen their environmental regulation. The assumption here is that rise in income leads to greater care for environment.

Fourth, local business control pollution because abatement reduces costs, Nehrt (1998) in his article *Maintainability of First Mover Advantages When Environmental Regulations Differ between countries* also support this idea and stated as “companies that invested earlier in environmental technologies perform[ed] better financially”. In other words basing his idea on Porter’s (1990) work Nehrt (1998) explained it clearly that, “firms in countries with lenient regulations inevitably will face tougher regulations and companies headquartered in countries that had tough regulations earlier and that innovated new technologies of reducing pollution will enjoy some sort of first mover advantage”. Hence, firms start to lobby their government to toughen environmental regulations (p. 79). Gray (2002) termed this as the “pollution halo” phenomena or the “California effect”. This is because of the positive spillover of efficiency in industries due to higher standards in California leading industries in other parts of the US to adopt similar standards of environmental efficiency.

Fifth, large multinational firms generally adhere to OECD environmental standards in their developing country operations. Based on these evidences he argues that the assumptions of “race to the bottom” model are not realistic and its predictions are inaccurate. It is extremely unlikely for a race to the bottom to happen in a realistic view of the world.

Although these arguments seem sound and based on empirical evidences, they are not immune to the hairsplitting criticisms from the side of the proponents of the Pollution Haven Hypothesis. The following section is a discussion of the main arguments of the proponents of the pollution haven hypothesis as a response to the criticisms by proponents of free movement of capital.

## **Discussion**

Which position is right? Is the pollution haven hypothesis right and that the location of industries and particularly pollution-intensive industries are determined by the strength of the environmental regulation in host countries? Or is the “pollution halo effect” right and foreign direct investment is positively affecting the environment? It may seem beside the point to the context of FDI and environment, but Hardin’s (1968)<sup>1</sup> concept of “tragedy of

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<sup>1</sup> Garrett Hardin(1968), ‘The *tragedy of commons*’. Science, 162(1968):1243-1248. In the absence of institutions which regulate the use of common resources, individuals will use it to its maximum point. He uses the dilemma when an individual animal herder put one additional animal to a common grazing land without

common” is of relevance in explaining the global situation under which investment is taking place at this time. The increased globalization of environmental issues without international consensus coupled with trade liberalization will eventually lead us to “tragedy of commons” where there is no single body addressing environmental concern. Every country strives to attract investors and produce as much as it can without much concern for the environmental impacts and by externalization of common global costs. This has happened and will continue to happen under liberalization.

The proponents of free trade argue that most multinational companies follow their home countries environmental standards when they establish firms in the south (developing countries). However, this has been contested and proponents of the pollution haven hypothesis have argued that MNCs use old technologies with more pollution when they invest in developing countries than home countries. Clapp argues  
*“... while MNCs are well placed to facilitate the development and transfer of clean technology to the south without the outside pressure of imposed regulation by the states in the north and south alike, without public embarrassment techniques practiced by environmental NGOs, and without a sort of outside financial assistance, global industry is highly unlikely to invest in cleaner technologies... Meanwhile, investment in clean-up, rather than clean technologies by MNCs only masks the problem.” Clapp (1998, p. 92)*

Furthermore, Lu (2010) found a difference on the sensitivity of the type of industries to environmental regulations. Chemical products, iron and steel products and paper products (pollution intensive) are highly influenced by regulation, whereas non-metallic and non-ferrous metals products (less pollution intensive) are not sensitive to regulation (p. 28). Although the proponents of the free trade argue that the assumptions of pollution haven hypothesis would not happen because OECD countries have regulated and laid tariff on the imports of products from less environmentally regulated countries, this in my view cannot avoid the inevitability of the problem. This measure has two problems to be applied to reduce the effect of FDI on the environment. First, Guoming et al. (1999) from their study on investment and environment in China concluded that export oriented firms are more environmentally sensitive than market seeking FDI in developing countries. If this is true the trend at this time shows that, many multinational companies invest in poorer countries not only because of the presence of cheap labor and resource but also market due to the high population and resulting consumption in host countries. Therefore, the impact of restriction of exports to OECD countries is insignificant in altering the flight of dirty industries to poorer countries. Countries could attract foreign investors to produce for domestic consumption and laying tariff and restrictions for exports in such countries products by developed countries might not lead to better environmental regulations. Second, this argument contradicts with the aims of World Trade Organization (WTO) i.e. liberalization of trade. If OECD countries restrict the entrance of products from poor countries, they are still violating the most important rules of WTO. Third, Dasgupta et al. (2002) rightly argued that “trade

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internalizing the cost of adding it, because he/she receives only a fraction of the cost shared by all members of the community. i.e. Maximizing individual profit at the expense of sustainability communal resource.

and sanctions are inappropriate and ineffective levers for narrowing the regulatory gap between low and high income countries". They rather suggest narrowing the gap by developing the regulatory capacity of poor countries.

Most of the arguments of the proponents of free trade are towards the difficulty to empirically test the pollution haven hypothesis. The pollution haven hypothesis is theoretically plausible but difficult to support it with empirical evidences. But this does not mean, that the hypothesis is wrong and with no implications. Different authors argued that, it is because of the weaknesses in the tools of obtaining the so called "evidences" which lead scholars to think this hypothesis is weak and criticize its basic assumptions. According to Mabey and McNally (1999) the use of aggregated data in the analysis of flow of pollution intensive industries is one of the limitations of those who criticize the pollution haven hypothesis particular and the negative effect of FDI on the environment in general.

However, the hypothesis is also limited in its scope when dealing about the "environment". It focuses on the effect of industries and particularly "dirty industries" and resulting pollution, and gives less emphasis to the effect of foreign direct investment on the general environment. Such issues as expansion of mechanized agriculture and resulting forest depletion, and over exploitation of natural resources by foreign firms for export to developed countries market are not addressed in this hypothesis. As a result the arguments against it also focus on the pollution coming from dirty industries and neglect the effect of foreign direct investment on environment. Here, the marginalization concept of Blaikie (1985)<sup>2</sup> is important in dealing how the expansion of capitalist production affects the long standing relationships between the environment and local people. Large scale mechanized agriculture; extensive natural resource extraction and other export based manufacturing by foreign firms displace local land users to marginal lands with steep slopes which lead to destruction of the marginal environment.

Mabey and McNally (1999) argue that the debate between both positions is limited and has not helped us to move forward in policies at international level. The relation between the environment and foreign investment is more complex than covered in the „pollution haven “pollution halo” debate. Environmental effect of FDI should go beyond simple pollution due to pollution intensive industries and include other very significant effects such as over exploitation of natural resource. According to these authors competition for FDI is “depressing” and “chilling” environmental standards at international level. However, the effect is not only through the relocation of dirty industries to less environmentally regulated areas. Not only pollution-intensive but also resource intensive industries have preference for low environmental standards and this leads countries to less tighten their environmental regulations to attract pollution and resource intensive industries.

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<sup>2</sup> Piers Blaikie (1985) the Political Economy of Soil Erosion in Developing Countries. The concept of marginalization....encroachment of the privatization of land ... forces marginalized people to use the commons more intensively and contributes to the shrinking potential of the commons themselves...this in turn leads to the degradation of the environment (p. 130).

Competitions to attract pollution and resource intensive industries may not be overt “race to the bottom” but chilling effect on regulation and its enforcement (p. 5).

As a solution to the wider impact of liberalization on the environment Mabey and McNally suggest several measures at international and national level. First, increasing host countries’ capacity to regulate and constructing international environmental standards on a long term. Second, since the first solution is not effective for short term, improving the environmental quality of Foreign Direct Investment by home countries is important as building institutional capacity is not easy and may take long time. (1999 see the original). Clapp (1998) also outline major measure which should be taken at international level including by MNCs themselves.

### **Conclusion**

From analysis of the both sides of the arguments and the wider politics of environment in today’s world, it is safe to conclude that, if countries are not competing to the bottom as the “pollution haven hypothesis” proponents argue, they are not also competing to have the most stringent environmental regulation. I can borrow Gray’s term “stuck at the bottom effect” or “regulatory chill” in which countries refrain from enacting stricter environmental regulation due to fears of losing a competitive edge against other countries in obtaining foreign direct investment(Gray, 2002, p. 301). Disagreements among powerful countries such as China and USA in international climate deals are testimonies of regulatory chill. They do not want to take the lead to implement stricter environmental regulation because of fears of economic failure due to outflow of capital. Hence, there is no reason for poor countries to strengthen their regulation and fail to receive capital flow through FDI while the whole world is competing for it. Given the absence of international agreement on environment and unfair trade relationships countries will still continue striving to be as open as possible for foreign direct investment to improve their GDP growth externalizing the environmental costs to the whole world.

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