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List of Abbreviations

As	Arsenic
B-dis	Boron
BOD	Bioligical Oxygen Demand
Cd	Cadmium
Cl-dis	Chloride
COD	Chemical Oxygen Demand
CSR	Corporate Social Responsibility
Cr	Chromium
Cu	Copper
DDD	Dichlorodiphenyldichloroethane
DDE	Dichlorodiphenyldichloroethylene
DDT	Dichlorodiphenyltrichloroethane
DTPA	Diethylenetriamine

EDTA	Ethylenediaminetetraacetate
EKZ	Environmental Kuznets Curve
FDI	Foreign Direct Investment
FDS	Fixed Dissolved Solids
Fe	Iron
GDP	Gross Domestic Product
GWCD	GEMS/Water Data Centre
H2O2	Hydrogen Peroxide
ICWRGC	International Centre of Water Resources and Global Change
MEA	Multinational Agreement
MFA	Multifiber Agreement
Mg-Dis	Magnesium
MNE	Multinational Enterprise
MSCI	Morgan Stanley Capital Information
NaCIO	Sodium Chlorate (I)
NaCIO2	Sodium Chlorate (II)
Ni	Nickel
NTA	Nitrilotriacetic Acid
Pb	Lead
PCDD	Polychlorinated Dibenzodioxins
PFC	Perfluorinated compound
PHH	Pollution haven hypothesis
POP	Population
TDS	Total Dissolved Solids
UN	United Nations
UNEP	United Nations Environment Program
VDS	Volatile Dissolved Solids
WGI	World Governance Indicator
WITS	World Integrated Trade Solutions
Zn	Zinc

1. Introduction

1.1 Prologue

Evaluating the pollution haven hypothesis (PHH) is becoming more and more important due to globalized supply chains on the one hand and an increase of environmental consciousness on the other hand. Trade is offering the chance to all countries around the globe to participate in global supply chains and to gain access to income and growth perspectives. Trade and globalization also offer countries possibilities to shift environmental-polluting productions to countries with weaker environmental standards.

Increased trade has led to a variety of possible production locations. Therefore, the shift of production facilities from developed countries with high income per capita and high environmental standards to countries with low income per capita and low environmental standards, has increased the profit margin of production owners. The low-income production workers in developing countries, where the populations' education is usually also low, still have gained first access to human development and prosperity.

The practice of exploiting developing countries to have affordable access to mass-produced goods is on the rise in western societies, due to the low per-capita income of developing countries.

The evolution of global supply chains and its impact has gained public attention. During the rise of environmental awareness in western countries in the 1970s, people raised concerns about exploiting developing countries for financial advantages. Especially, when environmental pollution is shifted to less developed countries.

The pollution haven hypothesis

The pollution haven hypothesis describes the shift of production facilities from countries with high environmental standards to countries with low environmental standards, with the aim to achieve cost benefits. The shift to less developed countries with low environmental standards gets more attractive with an increase in pollution intensity. This infers that the amount of pollution is a by-product of a global production process. Therefore, firms and their subsidiaries move geographically to regions where the costs of pollution are low, and the supply of production input is high. The textile industry is work-intensive, with a small amount of automation. India seems to be attractive as a pollution haven as it provides cheap labor force and has low environmental standards.

If the developing countries are not able to develop skill-based advantages in the global supply chain, companies will move on to another country where the possible amount of pollution is still high. These skill-based advantages are important for developing countries to build sustainable wealth and income. However, the new production hosting countries are facing a dilemma with an increase in the state of living as wages and environmental awareness of the local population are rising. This is leading to the loss of local advantages. It is a process, which is described by the Environmental Kuznets Curve (EKZ). (Kuznets, 1955; Kuznets, 1963) This development is leading to the so-called middle-income trap of developing countries (Felipe et al., 2012).

1.2 Research approach

The pollution haven hypothesis aims to switch Corporate Sustainable Responsibility (CSR) from a business-focused perspective to a macroeconomic perspective, including countries with different levels of income. PHH tries to manage a fair distribution of income and pollution between different developed and developing countries. It also offers a broader perspective of income and pollution issues between nations.

This research study is structured in the following way. The second chapter provides the previous literature on the PHH, the theoretical background of the used variables, an overview of the textile supply chain and its water emission values. The third chapter deals with the methodology that includes six constructed models for the research process and the setting of the models. The fourth chapter discusses the results of the empirical analysis. The fifth chapter provides the conclusion and limitation of the conducted models. Finally, the six chapter gives suggestions for further research.

2. Literature background

The following chapter presents the theoretical background of the pollution haven hypothesis and discusses the topic of water pollution, which is heavily exposed by the textile industry in India. Furthermore, the manufacturing procedure of the textile industry and the related pollution values, will be described.

2.1 Previous academic research on the pollution haven hypothesis

Evaluating the pollution haven hypothesis often leads to the discussion of comparative advantages between national economies. Dietzenbacher and Mukhopadhyay (2007) explained the PHH as a theory that developed from the Heckscher-Ohlin (HO) theory. The HO theory assumes in its easiest construct that two national economies only depend on two goods or two factors (labor and capital). The HO theory proposes that countries with high capital stocks export capital-intensive products and import labor-intense products from countries with easy and cheap access to labor. For instance, Germany as a high capital stock country, is producing cars and industrial machines and is importing products from countries that are labor-intense such as agricultural products from Brazil (Leamer, 1980).

Based on the HO model, the country that is relatively restricted on certain pollution permissions, will outsource pollution-intensive products to countries with low environmental standards. Therefore, developing countries are seen as the pollution haven as they are hosting dirty production facilities. The pollution haven hypothesis explains the differences between countries in terms of their policy instruments. It was further elaborated by Taylor (2005) and goes as follows:

$Yi = \alpha Ri + Xi\beta I + \varepsilon$ (Levinson & Taylor, 2008).

(Y) is the economic activity of a nation, (R) is written for the regulatory stringency and (X) describes several resources that influence (Y), while ε is the error term. The equation shows the negative correlation of economic growth and a nation's environmental regulation.

For this research, Y stands for the export of textile production goods. Foreign direct investments (FDIs), water pollution and the export of textile production are the dependent variables (DV).

FDIs are defined by the German Central Bank as: “transnational investments to companies with the purpose to influence business activities in the long run” (Deutsche Bundesbank, 2020)

FDI and water pollution are expected to be positively correlated. Both variables are influenced by several independent variables (IV): multilateral environmental agreements (MEA), environmental stringency, infrastructure, market potential, factor costs and governance factors. All variables will be explained in the following chapter.

The newly introduced variable (T) describes trade barriers that can occur by Multi Environmental Agreements. If these MEAs are canceled, international trade is stimulated (Brunner, 1997).

$Yit = vi + \alpha Rit + \gamma Tit + \theta RitTit + X'\beta it + \varepsilon it$ (Levinson & Taylor, 2008)

(T) is negatively correlated with (Y) economic activity, in this case with export-related textile production and (R), which describes regulatory stringency. The output of an economy can be understood as the interaction between regulatory stringency and trade legislation (Levinson & Taylor, 2008).

As firms usually aim to optimize profit, they might relocate to a different country as production elsewhere on the globe is cheaper (Levinson & Taylor, 2008). A broader array of researchers supports the theoretical approach that pollution havens are located in countries with less strict environmental policy (Bommer, 1999; Cole, 2004; Malm, 2012).

Dam and Scholtens (2008) also claimed that pollution havens are mostly located in developing countries with low environmental regulation. However, these countries are not the most corrupt or poorest countries. Yet, these developing countries need low environmental regulation to achieve economic advantages (Dam & Scholtens, 2008). There are some researchers on the other hand, that do not support the pollution haven hypothesis, so the “pollution havens paradox” was formulated (Taylor & Copeland, 2003).

The idea behind the pollution haven paradox is that an affluent tax can increase profits and environmental standards in the already production hosting country. Moreover, low-income countries are magnets for clean industries from a relative perspective (Copeland & Taylor, 2004). However, that kind of idea is missing the global perspective as globalization and FDI have the chance to increase wealth and economic prosperity (Strow & Strow, 2004).

The existing research on the pollution haven hypothesis has two different research approaches. In general, these research approaches describe firms often as a profit-maximizing organization.

The competitive advantages are usually characterized by capital accumulation or cheap labor, which is a cost advantage. Barry and Walsh (2008), as well as Malm (2012) claimed that most of the trade takes place between developed countries. The first research approach is the neoclassical one, where the HO model can be seen as the origin.

The second research approach on the pollution haven hypothesis focuses on how polluting firms are trying to shape the legislation on emissions. This effect is mostly occurring during the early developing stages of countries.

Yet, researchers have not agreed on one specific research methodology. Since the late 1990s or early 2000s, the research activities on the pollution haven hypothesis is amplified. Researchers such as Van Beers and Van Den Bergh (1997) have focused on trade flows of importing and exporting products across countries. What they have in common are the failed attempts proving the validity of PHH.

Environmental regulation has to be done on a global scale, making it complicated and diverse (Shadbegian & Wolverton, 2010). Even if environmental regulation can be measured, it is still not possible to foresee all variables. For instance, firm-specific treatments and tax reliefs can incentivize firms to settle in a specific area (Lian et al., 2016).

2.2. Influence factors on the pollution haven hypothesis for the textile industry

The following chapter 2.2 describes the literature background of the dependent and independent variables, which are part of the methodology and the empirical analysis in chapter 3.

2.2.1 Multilateral environmental agreements

The global textile industry is one of the most significant fresh water consuming industries in the world. Thus, emission emitting multinational enterprises (MNEs) are relocating their production facilities to countries with less stringent environmental regulations. That has a tremendous impact on economic activity and the reduction of environmental emissions as pollution havens are created (Kellenberg, 2009). A possible option, avoiding the relocation of MNEs are multilateral environmental agreements.

Multinational environmental agreements are playing an important role to encourage environmental stringency and to reduce water pollution caused by the textile industry. The mobility of global capital can neglect environmental stringency. Therefore, decentralized environmental policymaking has no positive and sustainable impact (Millimet & Roy, 2016).

Multilateral environmental agreement is an intergovernmental document whose purpose is to manage the impact, human activity has on natural resources. It has a binding function for all nations that have signed the agreement (Millimet & Roy, 2016). The MEA has to be approved by three or more countries, otherwise, it's called a bilateral environmental agreement.

These MEAs can be seen as an outcome of national economic development. A theoretical concept that describes this development is the Environmental Kuznets Curve (EKC). The EKC is closely connected to the Kuznets-Curve concept, which describes the empirical connection between economic growth and inequality in income distribution. During the development of an economy, economic inequality first increases and later decreases (Kuznets, 1955; Kuznets, 1963). The EKC is looking at the connection between the per-capita-income of an economy and an increase of environmental pollution at the beginning of economic development. At a later stage of this process, per-capita-income is still increasing while environmental pollution is decreasing due to the availability of expensive but clean technologies. Without this economic development, MEAs and their ratification would not be realistic. This also means that a minimum income per country as well as human development, is required for the transition to environmentally friendly technologies and the adherence of MEAs (Dinda, 2004). Dinda (2004) claimed that the proof of the EKC is not that clear. One possible option explaining this, is again the income level of countries. For instance, countries that have liberalized trade, have also increased their export and pollution levels (Kolcava et al., 2019). That means, high-income countries increase their import-level of goods, but they do not increase their level of pollution, which supports the PHH.

However, MEAs and previous trade agreements do not influence the relationship due to the low-income level of the hosting country. Therefore, it seems more that domestic institutions have a significant influence on the trade-induced shift of pollution levels. Democratic legitimate institutions often create environmental burdens in their home countries with the cause of shifting polluting production to low-per capita income countries (Kolcava et al., 2019). One major critic over MEAs is mostly the institutional freedom of how countries meet obligations. Often, countries only agree on a specific date in the distant future when they aim to meet a particular reduction of emissions. It makes a comparison between the agreement signing countries sometimes challenging as a proper benchmark is missing (Ben Kheder & Zugravu-Soilita, 2008). The connection between the textile industry and the chemical industry is very close. A lot of MEAs globally signed also influenced the textile industry and water emissions.

Most of the documents are established by the United Nations (UN) as they try to deal with atmospheric influences of humankind, marine environment, nature conservation policies, nuclear safety, noise pollution and hazardous waste (Birnie, 1977; Kanie, 2007). The most important MEA for the global textile industry might be the "Stockholm Convention on Persistent Organic Pollutions". The agreement came into force in 2004, May 17th and was ratified by India in 2006, January the 13th (Lallas, 2001). The aim is that emissions of harmful and polluting persistent and organic pollutants are reduced. These organic substances have several negative impacts on the human body, such as infertility and cancer.

2.2.2 Environmental stringency

Environmental stringency plays an important role in the pollution haven hypothesis. Furthermore, it is hard to measure environmental stringency and the implementation of environmental regulations. Botta and Koźluk (2014) defined environmental stringency as "(…) both for individual policy instruments as well as for overall environmental policy, is defined as a higher, explicit or implicit, cost of polluting or environmentally harmful behavior" (Botta & Koźluk, 2014).

Environmental stringency is the attempt of a country to price environmental pollution. On the one hand, it makes polluting technologies more expensive and on the other hand, it makes environmentally friendly technologies cheaper. These additional production costs are a competitive advantage for firms that use environmentally friendly technologies and a disadvantage for firms that use environmentally harmful technologies. That is why environmental stringency will harm FDI inflow but decreases water pollution in India, when assumed that environmentally unfriendly technologies are used. In the literature, some researchers support the connection between decreasing FDI decisions in a specific country and increasing environmental regulation (Yoon & Heshmati, 2017). But also, some researchers reject the connection between environmental stringency and decreasing FDI inflow. For instance, Neumayer (2001) mentioned that it is hard to prove evidence for PHH because of a general shift in global trade for greener supply chains. Nevertheless, there is progress on a global level, which shows the Stockholm agreement on persistent organic pollutants (Hagen & Walls, 2005).

Companies that use environmentally friendly technologies have a financial benefit, when polluting companies are taxed (Botta & Koźluk, 2014). Two different ways of implementing political and environmental stringency exist. Environmental stringency can be implemented by market-based policies or by non-market-based policies. Market-based policies are, for example, taxes on harmful emissions, trading schemes such as energy efficiency certificates and feed-in tariffs. However, this is only working for the electricity sector and deposit refund schemes. Thus, it is not relevant for the textile industry. Non-market-based policies can be implemented by setting new standards for emissions values or R&D subsidies (OECD, 2017). Next to this, Castelein (2018) researched a relatively weak connection between FDI attraction and environmental stringency.

For this study, setting and implementing new standards for emission values will play a central role. The database, which is used in this study, focuses on emission values of freshwater resources. As already mentioned above, environmental stringency is influenced by MEAs as a political tool. Although, environmental stringency and FDI inflow contradict each other. FDI inflow within a country is desired by most of the world's countries because it will lead to economic growth, which is mostly measured by GDP growth or GDP growth per capita. For developing countries, FDI inflows are immensely benefitting, as it can be seen as a political tool for growth and modernization and results in a lower unemployment rate. This is why FDIs are welcomed and promoted by developing countries such as India (OECD, 2002).

The OECD has focused on two sorts of elements for their environmental stringency indicator. Firstly, the environmental stringency supporting factors such as institutional support for energy efficiency and institutional promotion for renewable energy. Secondly, the OECD has created penalizing instruments such as environmental tax caps. These instruments mostly determine the political and social behavior of a country in environmental terms. For the present research, an environmental stringency indicator is needed that reflects the textile industry's specific elements, such as setting standards of emission values for harmful substances. Some of these substances are called perfluorinated chemicals, phthalates and chlorine benzenes (Pang & Abdullah, 2013).

In 2008, Ben Kheder and Zugravu-Soilita studied the efforts of firms trying to become more environmentally friendly and to improve their environmental performance. They concluded that joining the ISO 14001 is voluntary because the motivation of a company behaving environmentally friendly is easy to monitor (Ben Kheder & Zugravu-Soilita, 2008). Due to the voluntary nature of the ISO 14001, the index has to deal with a lack of information and is not valid for this study.

2.2.3 Infrastructure

For economic development and prosperity, the infrastructure plays an important role. Especially for the textile industry, where the mass production of physic goods has to be exchanged through the supply chain. Infrastructure includes the physical structures and helps economies with essential social needs and networks to provide cooperation, communication and trade between economies (Singhal et al., 2011).

Infrastructure is the backbone of economic prosperity (Khan & Kim, 1999). In infrastructure invested capital is creating employment in the construction sector and is also generating purchasing power, which is generally known as a "multiplier" for economic growth (Kessides, 1993). Besides, infrastructure is essential to maintain global supply chains. A well-equipped infrastructure can significantly reduce overhead costs in the production process (Asiedu, 2004). When it comes to the textile industry, physical infrastructure, such as railroads, water transportation systems, chemical pipelines and the shipment of resources (e.g. cotton, silk) is essential. IT-infrastructure is also extremely important to guarantee a reliable exchange of goods (Shah, 2014).

In India, the textile infrastructure and supply chain has developed rapidly after the liberalization of the Indian economy in 1991. In order to attract FDIs, India needs institutional stability and reliability. The same goes for other competitive producing textile countries (Narwal & Jindal, 2015). However, the Indian infrastructure was only ranked 44 on the Logistic Performance Index in the year 2018, which was published by the World Bank (World Bank, 2019).

Infrastructure in India is still in an extremely outdated condition, as the costs of passing along the produced items within the supply chain are still high. Yet, India has specific cost advantages, which is the cheap labor force, for example. The reason for the cheap labor force is the increasing population and the high labor-market integration of female workers of low education levels. As the textile industry is crucial for India and its economic development, they follow a long tradition.

The biggest export markets for India are the United States, the European Union and Canada. India is very famous for exporting raw materials of polyester filament fabrics and other human-made yarns. Thus, the chemical need for these products is very high and increases the freshwater consumption dramatically. India is also exporting major garments such as t-shirts, outdoor jackets, trousers and blouses. The textile supply chain is divided into different production steps (WITS, 2020).

These production steps are yarning, fabrication, dyeing and bleaching. Especially dyeing is very harmful to the environment. All goods are supplied to external customers of foreign countries. A well-adjusted supply chain is essential to reduce the lead time and costs of the product, which requires a well maintained and developed infrastructure (Ali & Habib, 2012).

2.2.4 Market potential

The concept of market potential seems to have a positive influence on FDI attraction. Industries and businesses are usually attracted by other companies and opportunities that lead to agglomeration effects (Wagner & Timmins, 2009).

As already mentioned in chapter 2.2.2, environmental regulation counteracts FDI inflow and is weakening the market attraction of a country. Yet, the accumulation of externalities is a key component that describes the economies of cities, market potential and the related economic geography (Wagner & Timmins, 2009).

One of the earliest researchers on market potential and on the positive influence of location choice was Harris (1954). He pointed out that higher demand leads to higher possible outcome for firms and investors. For instance, Harris (1954) found out that half of the US's national market was concentrated in the northeast, which only stood for twelfth percent of the US's landmass in the 1950s. Nonetheless, Harris (1954) has paved the way for the academic research of market potential and the accumulation of industries. For a monopolistic market, Helpman and Krugman (1985) have developed the home market effect (HME). Due to intra-industry trade (within industry trade) with specified products but no influence of comparative advantage, the number of firms increases faster than the economic output of a country. Hence, firms are concentrating on the reduction of transportation costs in the broader market. The consequences of emissions on a global scale, as well as trade liberalization, depend on the interaction of HME and PHH. Firms will concentrate on the broader market if HME dominates trade liberalization.

This is when the differentiation between goods is high and the distance between markets is considerable (Forslid et al., 2017). One of the fundamental researches of the PHH was the closer look at the inter-industry trade (trade between industries). The liberalization of trade leads to an increase in global emissions, in the case, the deal takes place between countries with a high-income difference. Hence, polluting industries are shifting to low-income countries where pollution is rising (Copeland & Taylor, 1995). Grossman & Krueger (1993) also wrote a critical article that postulated the opposite, that a policy of trade liberalization does not lead to a relocation of dirty industries. This can be justified with the low taxation on environmental pollution in the US. Keller and Levinson (2002) showed for the first time that environmental pollution abatement costs have a direct influence on FDI inflow in the US. Hence, FDI inflow and wealth growth in a country is negatively correlated with environmental protection.

On the contrary, a study evaluating the FDI inflow in China has shown the opposite. For China, weak environmental regulations are attractive for countries with low environmental regulations. However, regions in China with high environmental standards also attract companies from industrialized nations, which is due to publicity and social reputation in the industrialized nations (Dean et al., 2004).

Ederington et al. (2005) discovered one explanation of why the PHH is so hard to prove. Trade takes mostly place between developed nations. This is why differences in environmental legislation do not significantly impact the choice of firms' locations between developed countries. Therefore, environmental legislation affects vibrant and emerging countries because emerging countries have no high environmental standards. These countries have mostly established similar rules for environmental standards as well as institutional behavior. Head and Mayer (2004) claimed that, the size of the market plays an important role, when it comes to the location of the production. That means that bigger markets attract the production of goods.

Ben Kheder and Zugravu-Soilita (2008) introduced environmental regulation as a production factor, next to labor and capital, which are part of the production equation. For that reason, the government employed pollution taxes, that have a negative correlation with production outputs.

Also, Ben Kheder and Zugravu-Soilita (2008) have taken into account the fixed costs for launching activity in a country that differ from location to location. Hence, it estimated the country's market potential by using an approach developed by Harris (1954). They estimated the country's market potential by adding the GDP and the GDPs of the surrounding countries divided by the distance of the originating country. This approach developed by Harris (1954) has become the norm approach in literature. Head and Mayer (2010) researched the market potential for countries from the Benelux region. Belgium and the Netherlands have a high market potential due to the surrounding nations such as Germany, France and the UK. Due to the high market potential, both nations have developed a high income per capita. Yet, a country's income per capita can also be driven by a powerful domestic demand, which we can see in the US.

Martinez-Galarraga (2014) proposes that markets or regions, which have already established industries and businesses are also attractive for new companies due to the opportunities and intra-branch possibilities they provide. A higher diversity of industries will lead to a wider variety of companies and lower local prices. Furthermore, differentiated business models provide better access to education, which will lead to higher income-levels and higher consumption. This approach is called the 'New Economy Geography' (NEG) and was developed by Krugman (1991). The new approach is for the first time taking into account transportation costs, which are part of the production factors.

Besides, the approach of the perfect market is no longer existing. Different equilibriums are possible from now on and agglomeration effects are becoming more and more critical for the development of a regional market. Through these agglomeration effects, income disparities are getting more likely and more durable over time.

The NEG theory and the already mentioned findings of Head and Mayer (2010) display the enormous influence, market potential and agglomeration effects have on the countries' income level, the development of GDP, environmental pollution and the overall economic outcome.

The macroeconomic perspective of India

India is a dynamic country as it has a low per-capita income of 2,009.979$, in 2018 and a high annual per capita GDP growth rate of 5.709% in 2018 (World Bank, 2019). For India, as a country, the production of textiles for end-consumer plays an important role.

In general, the global textile industry has a tremendous impact on water and air pollution in the production hosting country. During the production process of textiles, water is needed to work the chemicals into the raw textile materials and to wash them off after every production step (Kant, 2012). Chemicals and chemical pollution are playing an essential role during the supply chain of the textile industry.

In 2016, Greenpeace published a product-test, testing outdoor clothing and its chemical concentration. It came out that almost all of the products were contaminated by per– and polyfluorinated chemicals (PFCs). In a higher concentration, these chemicals are harmful to the human body and can lead to infertility and cancer (Santen et al., 2016).

A connection between the chemical industry and water pollution by the textile industry in India exists. Even though, Castelein (2018) researched a relatively weak connection between FDI and environmental stringency.

India is a very relevant market for the PHH analysis due to the combination of India's market potential and possible water pollution.

2.2.5 Factor costs

Factors are inputs used to produce a specific output to generate economic profit. Factor prices and factor costs are the merits of the needed inputs (Moroney & Toevs, 1977)

The most crucial factors for the textile industry are labor, capital and raw materials that are needed for clothing (e.g. fiber and yarn). They are mostly made of wool or synthetic substances. In a modern economy, the costs of pollution and their influence on FDI inflow are playing a defined role. The most expensive and essential factor is labor and the cost of producing textile goods (Srebrenkoska et al., 2014).

Labor

Labor costs vary enormously depending on the country, the level of income and the required skills to fulfill the expectations of a specific job. For example, in the year 2004, when the multi-fiber agreement (MFA) phased out, Bangladesh received enormous economic growth due to cheap labor and increasing textile exports to countries around the globe. The labor force of Bangladesh has developed from a low-skilled and low-wage-level to a medium-skilled and medium-wage-level. This development comes mostly hand in hand with a rapid increase in GDP per capita growth. The textile industry's economic development is mostly fueled by the cheap female labor force. India's labor force and economic development in the sector of textile production has gone through a very similar development. In the year 2016, one hour of labor in the textile industry cost around 1.69$ (Kim, 2019).

Measuring the labor costs of working hours in developing nations is critical as it might be that the textile factories' black labor are unregistered workers. Thus, it seems to be more plausible to rely on the general public and social data, provided by the governments of India. Ben Kheder and Zugravu-Soilita (2008) have discovered the coherence between labor, capital and pollution on the PHH. Ben Kheder and Zugravu-Soilita (2008) have also explained a high correlation between factor costs of capital, labor and governance factors. Especially for developing countries that are aiming fast GDP growth rates and human development, the ratio between capital stock/labor force (K/L ratio) has a negative impact on the firms' location. This can be explained by the low technology level of an economy, which requires cheap labor force as it is the case in India. Also, the logarithmic-linearized lagged value of the K/L ratio is used, avoiding endogeneity with the dependent variables.

The K/L ratio has different limitations. Girardi (2017) has mentioned that the neoclassical approach of the K/L ratio is far from being proved as it often comes with limitations such as bounded rationality and unconsummated economic actors.

Taxation of business

Taxation of business plays an essential role in attracting FDIs. For instance, Switzerland is known as a country that still resists harmonization of personal and corporate taxation instead of providing financial advantages for global capital. As it turned out, corporate income taxes have a much stronger influence on location decisions of private firms than on the embodiment of personal taxation. Hence, taxation plays an important role in the choice of a business' location, which is also assumed by the neoclassical approach (Kirchgässner & Feld, 2001). Thus, perfect capital mobility is required as capital will move to places where the highest possible profits can be generated. The taxation of businesses occurs mostly for two reasons. First, it is a crucial tool for providing the modern welfare state with financial goals to fulfill the given tasks such as social spending and infrastructure development. However, corporate taxes can also be used to provide an environmental governance system to avoid harmful environmental pollution. For this reason, public participation in environmental legislation is needed. Secondly, the government can give formal regulation of corporate environmental taxation by the available support and informal regulation of the population (Zheng & Shi, 2017).

2.2.6 Governance factors

Institutional settings have a huge impact on environmental performance and growth perspectives for a national economy as a whole and especially for their operating businesses. Governance factors have a fundamental influence on attracting FDIs. That is the main reason why governance factors are essential for the pollution haven hypothesis (Peres et al., 2018). In this study, the worldwide governance indicators project (WGI) is used. The six, namely defined governance indicators are (1) voice and accountability, (2) political stability and absence of violence, (3) government effectiveness, (4) regulatory quality, (5) the rule of law and (6) corruption control. These indicators are evaluating the governmental performance of 200 countries (Kaufmann et al., 2011).

The definition of governance is discussed extensively by researchers and policymakers. Here, the following definition is used: "the traditions and institutions by which authority in a country is exercised. This includes (a) the process by which governments are selected, monitored and replaced; (b) the capacity of the government to effectively formulate and implement sound policies; and (c) the respect of citizens and the state for the institutions that govern economic and social interactions among them" (Kaufmann et al., 2011).

Shortly explained, (1) voice and accountability measure the ability of people, participating in the process of electing a government. That is why the freedom of media and the freedom of expression are taking into account. (2) Political stability and absence of violence/terrorism describe the likelihood of a destabilized government by violence and terrorism. Another important aspect is (3) government effectiveness. Government effectiveness represents the quality of public services, the degree of independence from political pressure and the quality of civil services. Also, (4) regulatory quality is measured in order to see how stable and fair regulations are to promote private sector development. The fifth (5) dimension is called the rule of law. This stands for the likelihood of criminal and violent behavior of agents in an economy. But also, for the reliability of closed contracts and the enforcement by the agents. The last (6) dimension is the control of corruption. This dimension describes how effective institutions work against corruption and how they can prevent it (Kaufmann et al., 2011).

Moreover, Ben Kheder and Zugravu-Soilita (2008) mentioned the importance of governmental factors in the context of the pollution haven hypothesis. Especially, for developing nations, political stability signals potential investors a stable investment environment. A stable investment environment is essential to guarantee return on investment.

It has been turned out that macroeconomic and institutional conditions improve the investment environment of a nation, attracting FDIs and economic growth more than the country's income level (Alguacil et al., 2011). Also, Wagner and Timmins (2009) pointed out the importance of a legal system that creates a safe investment environment.

Voice and Accountability

Voice and accountability are crucial to political stability and its regulatory quality. That is why voice and accountability can be described as the basis of FDI attraction. However, for the economic prosperity of a nation, it is necessary to give voice and accountability to the population (Saidi et al., 2013).

Political Stability and Absence of Violence/ Terrorism

Political stability and the absence of violence or terrorism will have a positive influence on the attraction of FDI. However, political stability and lack of violence or terrorism alone will not have enough impact to attract FDI, as traditional economic determinants are more important for economic growth and FDI attraction. Thus, an interplay between the conventional economic determinants and political stability is needed (Jadhav, 2012).

Government Effectiveness

Government Effectiveness is expected to have a positive influence on FDI inflow. In this study, it is assumed that the government is free of corrupt behavior. It is assumed that government effectiveness implies a government that can analyze problems and find solutions. Nizam and Hassan (2018) proposed that government effectiveness, especially in southeast Asia, is essential for giving political influence and participation to the people. Additionally, Nizam and Hassan (2018) stated that the effectiveness of government is crucial for long-term acceptance of a political system and political stability. Furthermore, a country's population always has to be integrated into the political system to achieve a long-term acceptance of the governmental legislation.

Regulatory Quality

A typical excepted formulation for regulatory quality given by the World Bank is "the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development" (World Bank, 2020).

Regulatory quality needs cooperation across nations. For instance, global supply chains, especially across the textile industry, still require fair collaboration and taxation of trade flows between countries. Moreover, anti-trust regulations have become more important. Also, the prevention of protectionism practice is an essential aspect of regulatory quality. Hence, regulatory quality plays a key role in attracting FDIs. Rammal and Zurbruegg (2006) outlined a strong relationship between the quality and effectiveness of regulations on investment and trade regulations of the FDI.

Furthermore, market size, level of education, and the skill level of the population have a more substantial influence on attracting FDI than the regulatory quality. Not protectionism is encouraging economic development but liberalization of trade. Rammal and Zurbruegg (2006) found out that for developing nations, regulatory quality is becoming more important if the countries have already received economic development. Due to that, the importance of a skill-based labor force is rising while the importance of a cheap labor force is declining.

Rule of Law

Since the 1990s, the term ‘the rule of law’ has gained relevance on a global scale. In the mid-1990s, the World Trade Organization was set up. Since then, globalization has improved global trade and global investment, which has become possible through international economic agreements. The concept of the rule of law describes the degree to which an agent trusts the official and in-official rules of a society (World Bank, 2020). The importance of rule of law for economic development is indisputable. Fair and equitable treatment is a significant issue among participating countries of international trade. The incentive is high to achieve asymmetric advantages by designing unfair trade regulations for the contract partner (O' Donnell, 2004).

Control of Corruption

Cuervo-Cazurra (2008) categorized two types of corruption, called pervasive and arbitrary corruption. The threat of pervasive corruption is more likely to the potential investor. It increases the costs of investing, while arbitrary corruption is uncertain and not foreseeable to the potential investor. Investors prefer to deal with arbitrary corruption due to the hope of non-existing corruption, especially in developing countries in southeast Asia such as in India. Moreover, Cuervo-Cazurra (2008) claimed that corruption can also have a negative impact on FDI. The negative impact on FDI occurs mostly due to uncertainty in developing countries and an increase in investment costs. As a result, an increase of corruption prevents FDI inflow (Al-Sadig, 2009).

2.3 Supply chain of the textile industry

The following chapter describes the different kinds of water pollution of the Indian textile industry and the stages of the textile production process related to the different production steps.

The textile industry is determined by raw products of fibers. These raw materials can be distinguished in natural fibers and human-made fibers, consisting of polymers that are mostly generated from non-renewable resources such as oil and gas. Particularly, for the modern outdoor clothing industry, polymers are heavily used. Hence, water emissions and fresh-water consumptions are rising due to an increase in production volume. This is especially happening in India as many production facilities were shifted there. These emissions during the textile supply chain are problematic for several reasons. First of all, nature and wildlife are directly affected by water pollution. Humanity is affected in the long run as the risk of cancer and infertility is growing. It is a by-product of the rising textile-production. During the textile supply chain, different production steps are implemented. Each production step has different impacts on the environment. As already mentioned, polymers, natural fibers and fresh water are the main components of textile productions (Srebrenkoska et al., 2014).

Pre-treatment process

The pre-treatment process aims to remove foreign materials from fibers to ensure their workability during the finishing process. The process can be distinguished in four steps, which are desizing, scouring, bleaching and mercerizing.

Desizing is used to remove prominent substances from the fibers. The process consumes a huge amount of freshwater, nearly 70% of the whole textile supply chain. The process also contaminates fresh water with several substances such as carboxymethyl, alcohol, fats, non-ionic surfactants, waxes and polymeric sizes (Ghaly et al., 2014).

The second step is called scouring. Scouring is the cleaning process of removing impurities from natural and synthetic materials. Especially synthetic fibers have the disadvantage of containing spinning, finishing and knitting oils. Scouring requires non-ionic surfactants as well as anionic surfactants. The non-ionic surfactants are consisting of alcohol ethoxylates and alkylphenol ethoxylates, whereas anionic surfactants consisting of phosphates and carboxylates. The removal of metal ions requires several substances such as nitrilotriacetic acid (NTA), ethylenediaminetetraacetate (EDTA), diethylenetriamine pentaacetate (DTPA), gluconic acid and phosphonic acids. These are called ‘complexing agents. Furthermore, substances on oil-bases such as polyacrylates and phosphonates require surfactant-free dispersing agents. Also, reducing substances that avoid the process of formatting of oxycellulose during the bleaching process are needed, which are named hydrosulfite and sulfite (Tanapongpipat et al., 2008).

The third step of the pre-treatment process is bleaching. Bleaching describes the process of removing unwanted colorings from the working materials. Hence, bleaching is used for different fibers and operates several types of chemicals. The most used oxidizing agents are hydrogen peroxide (H2O2), sodium chlorite (I) (NaCIO) and sodium chlorite (III) (NaCIO2). A significant issue about bleaching is the usage of copper, iron and heavy metals, which serves as a catalyzer. These metals are contaminating the fresh-water resources of production hosting countries heavily. In addition, it is difficult to abolish metal substances from the freshwater resources. One of the most dangerous bleaching substances for a long time was sodium chlorate (I). Nowadays, it is no longer used in Europe but is sometimes used illegally in India (Ranganathan et al., 2007).

The fourth step in the pre-production process is mercerizing. Mercerizing is a chemical process that grafts cotton for the dyeing process. The most commonly used substances during the mercerizing process are alcohol sulphates, anionic surfactant and cyclohexanol (Hashim et al., 2012).

After the pre-production process, the dyeing process takes place. Dyeing usually adds color to textile materials. In the early times of the textile industry, before the industrial revolution and the development of new technics, dyeing was done using plants and natural products, which were obviously more environmentally friendly. Today, many different dye substances are used that are chemical, environmentally harmful and cannot be broken down by the environment.

These substances are mostly used during the dyeing process of human-made fibers. Other substances such as EDTA and DTPA are even worse. It is claimed that these substances can affect the human fertility rate and the risk of cancer (Wang et al., 2011).

A different process for applying color to a substrate is printing. When Comparing printing to dyeing, printing has the advantage of fewer water consumption. 75-80 % of water consumption is reduced as printing does not require washing steps. The downside of printing is the higher concentration of polluted water compared to the dying process. The substances that pollute the water are mostly alcohol, ammonia, phosphoric, phenyl cyclohexane and binders. These are not only polluting the water but also the air (Zheng & Liu, 2006).

Finishing is the last step of the textile supply chain. Finishing adds a higher functionality and serviceability to the finished product, for instance, water, heat and cold resistance. For this purpose, yarn, fiber and fabric are treated with physical and chemical treatments to increase the performance.

A significant waste of resources is linked to the private sector. Most of the consumers do not need the performance spectrum of their clothing. For instance, a lot of outdoor jackets are designed for usage up to minus 20 or 30 degrees. This is not needed by most of the customers. Some of the used substances could be saved by a downgrade of the performance on the outdoor clothing (Savin & Butnaru, 2008).

For humanity, the most dangerous substances are the carcinogenic amines, which are mostly emitted during the dyeing process. Mostly phenyls, benzol and dimethyl benzene are causing cancer (Wang et al., 2011).

When it comes to fiber, one advantage of organic fibers compared to human-made fibers is the naturality of the used dyeing substances. Today, most of the used dyeing substances are sources of cobalt and chromium (Zollinger, 2003). Chromium can be found in soil and groundwater of different places of the world.

Problematic for the environment are persistent, hazardous and dangerous substances that are used in the textile supply chain. However, organic pollutants can also emit dangerous, environmental harmful substances. Once emitted to the atmosphere, these substances may travel a long way around the globe to a place where no human has ever been. Most of these substances causing cancer are bioaccumulative. Bioaccumulation becomes problematic when toxins accumulate in the food chain and overstrain the human body (Mackay & Fraser, 2000)

A principle source of pollution in the textile industry is chloranil, which is produced by dioxane and anthraquinone dyes. Chloranil comes from chlorinated phenols.

Other substances are called dioxins (PCDD). Especially for natural fiber, PCDDs are a byproduct of chlorinated phenols, which occurs during natural UV radiations.

Also, copper is involved in the process of bleaching and dyeing. All kinds of metals like copper, arsenic, bohrium and lead are used as catalysts during the dyeing process and which also contaminate the freshwater resources (Lin et al., 2014).

Textile wastewater is loaded with a great variety of different mixtures of organic and inorganic chemicals. The most polluting process of the textile production is dyeing black textiles. During the 1990s, nearly 100 to 150 liter of fresh water have been used. Today it is around 25 to 40 liters of fresh water. The main concern about the textile dyeing industry might be the usage of many different substances. Dye-works are used in combination with other substances such as acids, alkali, salts, carriers, fixing agents and surfactants (Von Sperling, 2007).

Today, mainly in developed countries, an advanced wastewater treatment process is existing. It can be distinguished between physical and chemical methods of cleaning wastewater. However, this wastewater treatment is adding additional costs to the production process, that is why it is often avoided in developing countries. Furthermore, wastewater can be cleaned under a high amount of energy. Nevertheless, the cleaning substances are still existing and have to be exposed (Al-Kdasi et al., 2004).

2.4 Water emissions of the textile industry

The following abstract describes the pollutants that are relevant for this study in more detail. Next to this, a closer insight of the implementation of the variables will be given.

2.4.1 Pesticides

Pesticides are playing an essential role in organic fiber textile production. It seems that organic fibers are better for the environment than human-made fibers as they are produced “naturally”. However, it is not that easy. 30% of the global textile production is produced by raw cotton. The production of cotton is environmentally very problematic. One kilogram of raw-cotton requires 10.000 liter of fresh water and the production is often inefficient as there is no advanced water-management and irrigation system in place. Yet, the production of cotton is essential to the economy of the production hosting countries as it is often the only source of income.

The bigger issue about the production of cotton is its high need for pesticides and its inefficient use of those pesticides. In addition, it is difficult to remove the pesticides from the wastewater, which makes the contaminated water going directly into the groundwater. Pesticides are essential to grow cotton in India and other places in Asia. When these raw cotton materials are used for the production process, they contaminate the freshwater along the supply chain (Szynkowska et al., 2004).

Some of the critical pesticides are dichlorodiphenyltrichloroethane (DDT), dichlorodiphenyldichloroethane (DDD), dichlorodiphenyldichloroethylene (DDE) (Saxena et al., 1980), alpha- and beta-endosulfan (Lu et al., 2000).

The primary issue, all of these substances have in common, are their bioaccumulation and carcinogenicity. Nowadays, these substances (DDD, DDT and DDE) are forbidden in the US and in the EU (Srivastava et al., 2009).

The second pesticide group describes a combination of aldrin and dieldrin. Aldrin was developed as an insecticide in the early 1950s. Dieldrin is a metabolite of aldrin, so the concentration of both pesticides has to be observed together. Since 2004 aldrin is forbidden worldwide and should not be found anywhere in the groundwater (Vanraes et al., 2017).

2.4.2 Phenols in the textile industry

Phenols are used in modern production processes. Especially during the textile dyeing process of synthetic, human-made fibers. Today, Phenol is produced from petroleum-derived feedstocks. For today's industrial production, phenol is an essential commodity. During the textile supply chain, phenols are mostly used for nylons. Due to its strong durability, nylons are often used for advanced marine products (e.g. sails or fisher-nets). Phenols are also used for outdoor clothing.

Phenols are emitted with every industrial process in which fibers or substances such as plastics, synthetics, aspirin, antiseptics, xylenol and pharmaceutical products are used (Gami, 2014).

Even, during the private washing at home, phenols are emitted to water due to the friction of the clothing. Today, phenols can be found all over the world, even in the least human-touched corner (Zhu & Duan, 2004).

As already mentioned, phenols are bioaccumulative and cancer-causing. They are emitted by the global textile production, along various production facilities. Due to the high need for fresh water as well as the relevance of the textile industry, phenols should be treated ceteris paribus. In a world free of human influence zero gram of phenols would exist (Sivakumar et al., 2014)

2.4.3 Metals in the textile industry

Metals and their emissions are playing an essential role in the modern textile industry. The dyeing process of textiles emits many of those, above mentioned, metals. Earlier in history, colors were added to the clothing by organic substances based on animals and plants. Today, these products have been replaced by metals such as aluminum, arsenic, barium, boron, cadmium, chromium, copper, iron, lead and zinc. Not all of these products are used in the same way and not all of these products are toxic for humans or animals in the same way. Therefore, not all metals will be subject of this study.

Metals are emitted during the whole textile supply chain process and most of them are emitted during the dyeing process. The textile industry mainly uses eight different metals, which are arsenic (As), copper (Cu), chromium (Cr), cadmium (Cd), iron (Fe), lead (Pb) nickel (Ni) and zinc (Zn).

Mainly, the heavy metals as cadmium (Cd), copper (Cu) and chromium (Cr) are used for the coloring of textiles. As already said, not all of these metals are toxic for the human body and the environment at the same level. Copper (Cu), for instance, is needed for the human body, whereas lead, carcinogenic, chromium and cadmium are toxic for the human body (Samaecka-Cymerman & Kempers, 2007). One part of the study is to test if an increase in FDI inflow in the Indian textile industry is leading to an increase in metal concentration in India's freshwater resources and an increase in textile production output (Bhardwaj et al., 2014).

2.5 Hypotheses

The first hypothesis is derived from the negative correlation between environmental stringency and economic activity (Brunner, 1997). For foreign investors, higher environmental regulation and its enforcement will lead to increasing costs of production. This will weaken the attractiveness of India and will deter FDI inflow. Thus, the first hypothesis is formulated as the following:

H1: FDI inflow in Indian textile industry is increasing the Indian textile output

H2: Increase in textile output in India will lead to an increase in water pollution

The higher amount of water pollution is influenced by the higher textile production output. A higher amount of production will usually lead to an increase in environmental degradation (Dam & Scholtens, 2008).

H3: An increase in Indian market potential will lead to an increase in Indian FDI inflow

A large market is promising a greater amount of profit, due to a bigger amount of revenue and decreasing fix costs (Bloom et al., 2010).

H4: A reduction in factor cost will increase FDI inflow

As a continuation of H3, decreasing costs in production will lead to a greater amount of profit. Furthermore, factor costs are costs of missed opportunities in that case of missed school enrollment. Developing a proper business model requires well educated and capable employees (Moroney & Toevs, 1977).

H5: An increase in governance factors will increase Indian FDI inflow

Guaranteeing free movement of capital has to be enabled by institutional settings, which are influenced by governmental performance (Kaufmann et al., 2011).

H6: An increase in Indian infrastructure will increase Indian FDI inflow

This hypothesis is a continuation of H5. A proper developed and maintained infrastructure is providing economic perspectives and chances (Singhal et al., 2011).

3. Methodology

The following chapter describes the procedure of the empirical analysis, how the data was collected, operated and provides a simplified model construct.

3.1 Data collection and operationalization

The following chapter describes the dependent and independent variables and their operationalization. In addition, it transfers the theoretical basis to a practical approach.

The variables for the operationalization of FDI, export, market potential, governance factor, infrastructure and factor costs are provided by institutional organizations such as the World Bank and its sub-organizations World Integrated Trade Solutions (WITS) and World Governance Indicators (WGI). Referring to the hypothesis, the analysis consists of 18 variables covering six models. GEMStat provides the dependent variables for the water pollution emissions, which are seven variables: B-Dis, BOD, COD, Cl-Dis, Mg-Dis, FDS and TDS. The data for environmental stringency in India is too rare to be derived or generated in a proper way to fulfil the requirements of the study.

FDI operationalization

FDIs are playing an important role for the development of emerging countries. India has started the liberalization of its economy in the early 1990s. Still, some investors shy away from high regulation, bureaucracy and protectionism.

Due to the Indian Ministry of Textiles, India has increased its attractiveness for FDI inflow since the year 2000. The Indian textile industry employs 35 million people and additional 56 million people in dependent industries (Bhawan, 2020). After the year 2000, FDI inflow in India increased dramatically. Bevor the year 2000, FDIs in India were close to zero. But, in the year 2000, FDIs increased to 2.06 million USD and in the year 2008 even to 157.52 million USD.

Moreover, FDI is not provided by the World Bank or any other source for the time horizon between 1990 and 2008. Due to that reason, FDIs in the Indian textile industry are calculated by the multiplication of the overall FDI inflow to the Indian economy (World Bank, 2020) and the added value of textile and clothing manufacturing in India (World Bank, 2020).

Textile Export operationalization

These emission variables are influenced by one independent variable, which is ‘Export India’. Furthermore, ‘Export India’, is also influenced by FDI as an independent variable. The data for Export India is generated by World Integrated Trade Solutions (WITS, 2020), which also belongs to the World Bank. The variable describes the amount of textile export from India to 23 industrial nations. As a definition for the 23 industrial nations, the classification from MSCI is used (MSCI, 2019).

WITS is providing the amount of textile exportation from India to each country and year. Furthermore, the variable Export India is generated by the total sum of exports to industrial nations for the years 1990 to 2008. The absolute numbers of export are needed to test the relationship between export, water pollution, FDI and textile production output in India. The idea behind the variable ‘Export India’ is to test the influence of the export-oriented production on water pollution in India.

Market potential operationalization

Two variables cover the macroeconomic component of the market potential in India. The first one is the size of the population in India, which is still increasing rapidly as it is moving through the so-called demographic transformation (Bloom et al., 2010). The second variable is the GDP in India as it is increasing rapidly too. The GDP variable also displays the potential for other businesses to develop within the country's economic environment.

Both variables of the market potential describe the possible economic prosperity, India can provide to potential investors. Furthermore, the size of the population describes the possible pool of labor force for a labor-intensive business segment such as the textile production. Taking into account the already existing GDP and the size of the labor force, both variables are an indicator for future potential growth. Both variables are generated from the World Banks data source (World Bank, 2019).

Governance factors operationalization

From the perspective of an investor, governance and regulation is a crucial component to attract FDI. To analyze the governmental performance, six independent variables are taken into consideration. The data is generally provided in two versions: in an absolute index estimation and a relative ranking (Kaufmann et al., 2011). For this thesis, the relative ranking is used. The six variables of governance factors are Voice and Accountability, Political Stability and Absence of Violence, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption (Kaufmann et al., 2011).

The six variables are generated from the Worldwide Governance Indicator ranking, provided by the World Bank (Kaufmann & Kraay, 2010)

Infrastructure operationalization

Infrastructure is a critical key asset for a nation to provide sustainable growth, prosperity and to attract FDI. Especially for the textile industry, physical infrastructure is essential. For a classic industry sector as the textile industry, the accessibility of the internet is necessary, especially for IT-purposes. This requires individuals that are capable of using the internet. The best way to get in touch with modern IT-infrastructure is the personal use. To measure the populations' affinity and the possible number of individuals that can use the IT-infrastructure of a company, the variable 'individuals using the internet' is taken into account. Considering that in 1990, not even the industrialized nations fully knew how to use the internet. Therefore, not the total amount of individuals is significant, but the percentage increase of individuals using the internet (World Bank, 2020).

Besides the IT-infrastructure, physical infrastructure plays an essential role in producing and moving physical goods around. The database on physical infrastructure for the years 1990 to 2008 is pretty rare for India. Therefore, the physical infrastructure is not presented during this study due to a lack of data. Otherwise, the data would stand for the physical infrastructure and could be an indicator for the possibility to move physical goods in a proper way around.

Environmental stringency operationalization

There are different ways of penalizing environmentally harmful action. Environmental stringency mostly reduces profit margins. Due to that, the incentive to run a business in an environmental regulated country is reduced (Dam & Scholtens, 2008). India's environmental stringency can only be measured by the environmental-related tax revenue, published by the OECD since the year 2005 (OECD, 2020). Moreover, India has joined the international trade liberalization since the year 1991, together with a tremendous increase in FDI inflow (Jain, 2017). This leads to the conclusion, that for the observed horizon of 1990 to 2008, India had no explicit kind of environmental stringency. Despite that, the concept of environmental stringency is essential to environmental legislation of a country (OECD, 2020). Furthermore, environmental stringency is essential to analyze the PHH (Levinson & Taylor, 2008). If India had an active environmental monitoring and penalty system for environmental pollution, water emissions would be expected to rise and fall at the same level as the textile production output (Dam & Scholtens, 2008).

Moreover, the missing data of environmental stringency is not ideal. However, focusing on water pollution in absolute terms is still beneficial. In that way, it is possible that the direct impact of India's overall economic development and environmental policy can be observed in absolute terms. Hence, meaningful results can still be expected.

Environmental pollution operationalization

Much more critical for the PHH analysis are the numbers of the pollution values in India, which are provided by the Global Freshwater Quality Database GEMStat. GEMStat's purpose is to analyze global inland water quality. GEMStat is an active part of the GEMS/Water Program of the United Nations Environment Program (UNEP). The International Centre of Water Resources and Global Change (ICWRGC), located in Koblenz, Germany, is hosted by the GEMS/Water Data Centre (GWDC) (GEMStat, 2020).

The data of the GEMStat data section is voluntarily provided by the countries themselves, which can lead to concerns of moral hazard (GEMStat, 2020). For instance, if data providing countries are punished directly or indirectly with penalties, in the case water values are not satisfying, then these countries have incentives to counterfeit their data. Especially if pollution is part of the countries' business model, where it is the case in India. The analyzed water is taken out of fresh water sources with one-meter depth. These are mostly rivers, lakes and other water resources.

GEMStat functions on a voluntary basis. Especially for emerging markets, GEMStat is not entirely consistent. Pesticides, phthalates and substances such as chloride and magnesium are relevant for the textile industry. These substances are not all monitored for each year, water measurement station and each polluting substance. But there are existing five water monitoring indicators that sum up pesticides, dyeing substances and phthalates. Two variables are standing for their own: Cl-Dis (Chloride) and Mg-Dis (Magnesium). Both are used for textile dyeing, especially for the whitening process of textiles. Chloride is hugely harmful to wildlife animals, fishes and bioaccumulation. Two other important indicators of water measurement are Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD). Both variables are critical indicators of water quality. BOD measures the amount of oxygen needed by microorganisms to decompose organismal waste (Lee & Nikraz, 2015).

The more bacteria use oxygen, the pollution level is higher. This might be injurious for fish, river and lake biodiversity as there is less oxygen. Phosphates and nitrates can both lead to an increase in BOD (Lee & Nikraz, 2015). Especially phosphates are emitted through the textile dyeing process (Rudolph et al., 1995). COD is an indicator for the emission of pesticides in freshwater sources. This is problematic for animals and humans due to bioaccumulation and other negative aspects from cancer to human infertility. COD is generally an indicator for the emission of pesticides. Pesticides are mostly used during the production of cotton in India. During the whole process of textiles, including slashing, bleaching, mercerizing and dyeing, water consumption and water pollution are high as well as the emitted pesticides from the washed cotton (Munnaf & Tusher, 2014).

The primary indicator for the water emissions during the process of bleaching, mercerizing and dyeing is Total Dissolved Solids (TDS). TDS are the portion of total solids in a water sample that passes through a filter with a nominal pore size of 2.0 um (or smaller) under specific conditions (Weber-Scannell & Duffy, 2007). TDS is mainly influenced by Glauber salt and other kind of salts. Furthermore, the processing of textile salts is increasing the salt concentration for wildlife surfaces and groundwater on a toxic level (Weber-Scannell & Duffy, 2007).

FDS (Fixed Dissolved Solids) is very close related to TDS, it also describes the proportion of dissolved salt in analyzed water. FDS plus the amount of VDS (Volatile Dissolved Solids) reveals the amount of TDS. VDS stands for the amount of sugars, fatty acids as well as organic colloids. However, for this study only the amount of FDS and TDS are relevant (Ahn et al., 1999).

Boron (B-Dis) has several applications in the textile industry. On the one hand, it can be used as a pesticide for cotton cultivation, on the other hand it can be used during the textile washing process. B-Dis is not toxic for humans or mammals but for arthropods, which play an essential role in biodiversity. It is a rare earth element and should not be used lavishly. B-Dis is existing in soil on an average of 10-20 ppm, in seawater of 0.5-9.6 ppm and in fresh water of 0.001-1.5ppm. B-Dis is mostly used in the textile industry for synthetic fibers (e.g. nylon) and during the dyeing process. B-Dis is also used for more exotic products such as textile glass fiber and the processing of leather. It is essential for the textile industry due to its various applications (Sokmen & Buyukakinci, 2018).

The relevant data, which is provided by GEMStat was collected from 72 rivers and groundwater stations across India. The data covers the years from 1990 until 2008. Building 7 relevant variables and time series, requires a roundup of the data. Furthermore, not all 72 rivers provided a gapless data basis. Due to that reason, data was summed up by building the mean out of the 72 river and groundwater stations, for each year and water pollution indicator.

Factor costs operationalization

Factor costs are the attempt to introduce a negative influence on the attraction of FDI to the Indian textile industry. Furthermore, the model of factor costs is operationalized by the variable inverse school enrollment. The data is generated by the World Bank (World Bank, 2020). The idea behind the independent variable of school enrollment is to show the impact, a bad education policy can have on the possible economic development of a country. Furthermore, the variable is called inverse school enrollment. The variable is operationalized by subtracting the variable data of school enrollment from 100, for each year 1990 to 2008.

3.2 Building the dataset

The primary tool of the analysis is the analysis of variance (ANOVA). The purpose of the ANOVA is to analyze one dependent variable (DV). Due to the design of the model, six ANOVAs are done to analyze the different hypotheses.

Imputation

Building the data set requires dealing with missing data. A significant issue is the lack of completeness. The data for the pollution variables of the year 1994 are missing. Data for the TDS variable of the year 2007 and 2008 are missing as well. In addition, the data for the factor costs from the year 2004 until 2006 are missing either. For the governance factors, the data for the years 1990-1995, 1997, 1999 and 2001 is not complete.

Imputation is a statistical method that deals with this missing data. Eliminating the missing data from the dataset is not realistic due to the short timeline of the statistical dataset and the amount of missing data (Royston, 2004). For the imputation process, an assumption of a positive accumulation on the data value is made. The increase in pollution and production output will be higher in 2008 than in 1990 for the same reason. Despite that, singularity-based imputation on the median or mean is not useful (Royston, 2004). Moreover, an imputation based on a regression analysis seems to be more plausible due to the more reality-based approach (Royston, 2004).

The main imputation is done by multiple imputations. For each missing value, several valuations are done and averaged by SPSS. Multiple imputations are more likely to evaluate the missing values than a single imputation. 10% of the data is missing due to lacking measurements of the Indian government. Furthermore, White, Royston & Wood (2011) recommend running as many imputations as possible, when data is missing. Therefore, ten multiple imputations are done using SPSS.

3.3 Basic analysis

The purpose of the chapter is to reduce the complexity of the model and to give a brief overlook of the data set and the model construct. Figure 1 shows how water pollution values, that are affected by the export orientated production shift to India. The main force to increase textile production in India is an increase in FDI. FDI are attracted by several macroeconomic and institutional settings in a positive and negative way.

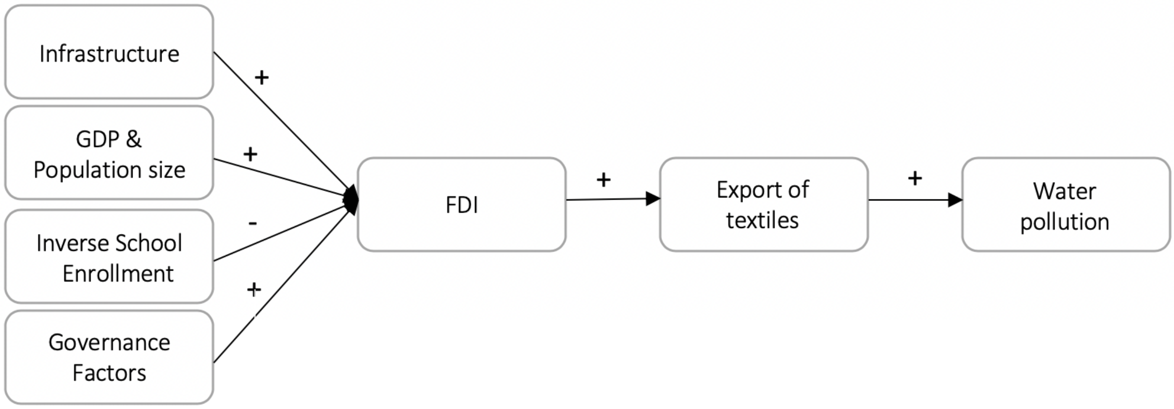

Figure 1: The effects on water pollution

Source: own illustration

Referring to the hypothesis, the analysis consists of 19 variables covering six models. GEMStat provides the dependent variables for the water pollution emissions, which are seven variables: B-Dis, BOD, COD, Cl-Dis, Mg-Dis, FDS and TDS. These emission variables are also influenced by two independent variables.

The second important variable is 'Export India', which is a dependent and independent variable. The data is generated by World Integrated Trade Solutions, which also belongs to the World Bank. The variable describes the amount of textile export from India to 23 industrial nations. As a definition for the 23 industrial nations, the classification from MSCI is used (MSCI, 2019).

For each of the six hypotheses, a separate ANOVA was done using IBM´s SPSS. Six requirements of the dataset have to be fulfilled, when analyzing the data with ANOVA.

First of all (1), the measurements have to be independent. (2) The variables have to be at least measured on an interval scale. (3) The independent variable has to be independent and measured on a nominal scale. (4) The dependent variable has to be normally distributed. (5) The number of statistical outliers has to be low. (6) The variance of the data set has to be homoscedastic (Baur, 2012).

3.4 The regressions model construct

This study's aim is to provide insides on the concept of the PHH for the Indian textile industry, including several macroeconomic influence factors on the economic development. Providing a closer look at these topics, six models have been worked out. All variables have been weighted equally and analyzed by various ANOVA analyses to avoid overlapping.

The impact of FDI on textile export values is important for the economic development of the industry sector (Levinson & Taylor, 2008). Furthermore, the influence of textile export to industrial nations and its effect on water pollution in India is still the central aspect of the regression model construct.

The aim is to answer the overall question, whether industrial nations are shifting the polluting textile industry to less-developed nations, avoiding pollution in their home countries and increasing the consumption of cheap textile products.

The first model is called the 'export production' model. The purpose is to show the general effect of FDI inflow to a country and its impact on export-oriented production growth.

The following models will show how an increase in production is influenced by macroeconomic circumstances and the impact an increase in production has on water quality in India.

The second model describes to what extent, 7 water pollution variables are influenced by the export-oriented textile production and is called ‘water pollution’. The derivative from the first model leads to the assumption, that an increase in export-oriented production is driven by an increase in FDI. The third model is named the ‘market potential’. The idea behind this model is to show the impact of two macroeconomic factors on the attraction of FDI. The first factor is the number of GDP in India in general, whereas the second factor is the population size. Both factors in relation are an indicator for the overall economic and human development of a country (Harris, 1954). In addition, both factors show the economic growth perspectives. For a long-term investor, growth perspectives are essential to evaluate an investment decision (Uvalic, 2009). The fourth model is called ‘factor costs’ and its purpose is to introduce one variable that contradicts FDI attraction. For this reason, the inverse function of ‘school enrollment’ for the years 1990 to 2008 was designed. Moreover, the model assumes that governmental failure is negatively correlated with economic prosperity and industrial growth. The purpose of the fifth model is to measure how the institutional setting affects FDI attraction to an economy in general. The model is called ‘Governance factors’ and consists of six independent variables, which are voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, the rule of law and the control of corruption (Kaufmann et al., 2011).

The last model is called 'infrastructure'. The model is an extension of the fifth model as it also measures governmental performance but in the real economy. The model aims to transfer the theoretical construct of governmental performance into a reality-based approach. However, there is a lack of data on the physical infrastructure in India for the years 1990 to 2008. Thus, the independent variable 'individuals using the internet' is introduced. The variable has the capability to provide the socioeconomic nexus of the Indian population (Singhal et al., 2011). A vital infrastructure is necessary to respond to the local and global product demands. Moreover, IT-infrastructure drives an effective labor-market (Shah, 2014).

4. Empirical analysis

The fourth chapter displays the results of the ANOVAs, which were conducted for each model. Each ANOVA has to fulfill six requirements to be meaningful. Furthermore, every model has to deal with its own challenges, which comes along with the setting of the model.

4.1 Descriptive statistics

The following table presents the descriptive statistics of 19 variables from the original data. In general, N stands for the frequency of the variables' values. In this case, the original data for FDI consists of 19 values. The original data includes values for each year during the time period 1990 to 2008 and 10 imputations of the overall model. Therefore, N 209 is the result of 19 original values multiplied by 10 imputations.

Furthermore, it is important to mention that N differs across these 19 variables as for some variables, data is missing. For example, for BOD, the value for the year 1994 is missing. This affects the overall number of N.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Variance
FDI in Textiles in India Mrd Dollar	209	1350000,00	185400000,00	45847368,4211	2894632324291 500,500
Export_India	209	160714,90	770398,74	426671,9489	34653235056,11 5

BOD	208	4,06	17,33	8,3838	16,793
COD	208	20,14	81,04	32,6284	256,645
CL_DIS	208	46,88	128,54	69,9805	434,996
MG_DIS	208	21,73	76,10	46,7885	281,306
FDS	208	236,09	368,43	297,1534	1662,302
TDS	206	264,36	396,67	340,9507	1382,482
BDIS	208	,15	1,06	,3346	,041
GDP	209	270105341879,23	1216735441524,86	552472487887,2961	82359943992185100000000,000
POP	209	11115231,40	1200669765,00	979694751,4421	62148939925637584,000
Individuals_Internet	209	,00	4,38	1,0773	1,916
Voice_and_Accountability	200	59,13	64,00	61,0852	1,994
Political_Stability_and_Absence_of_Violence	200	9,05	19,15	14,9372	5,650
Government_Effectiveness	200	38,42	55,44	45,0539	19,593
Regulatory_Quality	200	26,09	45,10	39,5406	23,403
Rule_of_Law	200	53,96	64,00	58,5556	6,325
Control_of_Corruption	200	35,86	48,45	42,9758	7,852
Schoolenrollment	206	-8,85	10,70	-3,9973	32,415
Valid N (listwise)	195				

Table 1: Descriptive Statistics

4.2 Empirical results

Six requirements of the ANOVA analysis have to be fulfilled in order to provide reliable and valid results.

The first requirement is the independence of the measurements. That requirement is fulfilled due to two reasons. The data can be seen independently because of the providing platform GEMStat, which is supported by the organization of the united nations. Whereas, the dataset of the water pollution is gathered by the government of India and provided by GEMStat. The time horizon surprisingly ends with the year 2008, which could be seen as a hint that water pollution, caused by the Indian textile industry is hushed up. Second, the dependent variable has to be at least interval scaled. This requirement is fulfilled for all dependent variables of the six different models. Third, the independent variable has to be independent and nominal scaled. The requirement is fulfilled due to the same reason as the first and the second requirement. Fourth, the variables have to be relatively normal distributed. No variable is perfectly normal distributed. However, the ANOVA is relatively robust against not perfectly distributed variables (Blanca et al., 2017). The fifth requirement for a meaningful ANOVA is, that no meaningful outlier across the data set are existing. This is true for all the variables, especially for the water pollution values. The sixth requirement deals with the homoscedasticity of the dataset. The variance for all groups should be similar (Baur, 2012). That is fulfilled for the data set.

Model 1: Export production

Again, the first model is called ‘Export production’ and describes the relationship between FDIs and exports. It is essential to the concept of PHH to consider the number of exports to industrial nations. FDI attraction to developing countries is associated with overall economic growth prospects.

The model has a high goodness of fit for the original data. The value for the adjusted R Square is .723. Furthermore, the value for the Durbin-Watson test is not near 2, with a value of .705 for the original data. This is a sign for positive autocorrelation. The value of significance for the pooled data is $p< .01$. That means FDI is significant for the export-oriented production of textiles in India.

Model 2: Water pollution

The second model 'water pollution', was designed to show the impact of export-oriented textile production to industrial nations on the pollution level of water quality. Therefore, seven independent variables are designed to accumulate different types of water pollution (eg. pesticide, metals, heavy metals, salts and phthalate).

These seven dependent variables of water emissions are BDIS, BOD, MG DIS, FDS, CL DIS, TDS and COD. The independent variable is ‘Export India’. GEMStat relies on data that is measured by the Indian government. However, the reliability of the reported data is high as GEMStat is a trustworthy institution.

The model for B-Dis has a low negative goodness of fit for the original data. The R^2 for the overall model is .11 (adjusted $R^2 = .10$), indicative for a low goodness-of-fit. The value for the adjusted R^2 is -.51, that means that R Square is zero. Furthermore, the value for the Durbin-Watson test is near 2, with a value of 1.926 for the original data. This shows that the model is not autocorrelated. The value for the pooled model is highly significant with a value of $p < .01$. However, due to the low goodness of fit export production is not significant for B-Dis.

The model for BOD has a low goodness of fit. The R^2 for the overall model is .235 (adjusted R^2 = .30), indicative for a low goodness-of-fit. The value for the adjusted R^2 is .187. Furthermore, the value for the Durbin-Watson test is not near 2, with a value of .732 for the original data. This shows that the model is autocorrelated. The model is not significant for the pooled model with a value of $p > .27$. That means that the export production is not significant for the water pollution values of BOD:

The model for COD has a low goodness of fit for the original data. The R^2 for the overall model is .019 (adjusted R^2 = .30), indicative for a low goodness-of-fit. The value for the adjusted R^2 is -.042. That means that R^2 is zero and shows no correlation. Furthermore, the value for the Durbin-Watson test is not near 2, with a value of 1.071 for the original data. This shows that the model is autocorrelated. The data for the pooled model is significant with a value of $p < .01$. However, due to the low goodness of fit for the original data export is not significant on COD.

The model for Cl-Dis has no goodness of fit. The R^2 for the overall model is .009 (adjusted R^2 = .10), indicative for a low goodness-of-fit. However, the value for the adjusted R^2 is -.053. That means that R^2 is zero. Furthermore, the value for the Durbin-Watson test is not near 2, with a value of 1.140 for the original data. This shows that the model is autocorrelated. The model is not significant for the pooled data with a value of $p > .686$. Due to that, export is not significant for Cl-Dis.

The model for Mg-Dis has a no goodness of fit for the original data. The R^2 for the overall model is .000 (adjusted R^2 = .10), indicative for zero goodness-of-fit. The value for the adjusted R^2 is -.062. That means that R^2 is zero. Furthermore, the value for the Durbin-Watson test is not near 2, with a value of .944 for the original data. This shows that the model is autocorrelated. The model is not significant with a value of $p > .986$. That means that, export is not significant for Mg-Dis.

The model for FDS has a no goodness of fit for the original data. The R^2 for the overall model is .002 (adjusted R^2 = .10), indicative for a zero goodness-of-fit. The value for the adjusted R^2 is -.060. That means that R^2 is zero. Furthermore, the value for the Durbin-Watson test is not near 2, with a value of 1.165 for the original data. This shows that the model is autocorrelated. The data for the pooled model is not significant with a value of $p > .843$. That means that the influence of export on FDS is not significant.

The model for TDS has a low goodness of fit for the original data. The R^2 for the overall model is .187 (adjusted R^2 = .10), indicative for a high goodness-of-fit. The value for the adjusted R^2 is .129. That means that R^2 is low. Furthermore, the value for the Durbin-Watson test is near 2, with a value of 1.629 for the original data. This shows that the model is not autocorrelated. The model is not significant with a value of $p > .151$. That means that the influence of export on TDS is not significant.

Model 3: Market potential

The idea behind this model is to show the impact of two macroeconomic factors on the attraction of FDI. The first factor is the number of GDP in India in general, whereas the second factor is the population size. The model shows the impact of the investors' decision on the production facilities' location.

The model for GDP has a high goodness of fit for the original data. The R^2 for the overall model is .825 (adjusted R^2 = .10), indicative for a high goodness-of-fit. The value for the adjusted R^2 is .814. That means that R^2 is low. Furthermore, the value for the Durbin-Watson test is near 2, with a value of 1.469 for the original data. This shows that the model is not autocorrelated. The model is significant with a value of $p < .01$ for the pooled model. That means that GDP is significant for the attraction of FDI.

The model for POP has a low goodness of fit for the original data. The R^2 for the overall model is .147 (adjusted R^2 = .10), indicative for a high goodness-of-fit. The value for the adjusted R^2 is .097. That means that R^2 is low. Furthermore, the value for the Durbin-Watson test is near 0 with a value of .568 for the original data. Due to that reason, the model is positive autocorrelated. The model is not significant with a value of $p > .087$ for the pooled data. That means that the population size of India is not significant for the attraction of FDI.

Model 4: Factor costs

The fourth model was designed to give a deeper inside on missed chances on a socioeconomic level and the influence on economic prosperity for a developing country. For this reason, the inverse function of 'Inverse school enrollment in India' has been designed.

The R^2 for the original data is .796 (adjusted R^2 = .50), indicative for a high goodness-of-fit as well as an adjusted R^2 is .782 according to Cohen (1988). Furthermore, the value for the Durbin-

Watson test is near 2, with a value of 1.569 for the original data. This shows that the model is not autocorrelated. The model is significant with a value of $p< 0.000$ for the pooled data. That means that school enrollment is significant for FDI.

After 1990, the quality of education increased in India and the inverse function of school enrolment in India decreased. Due to that, the statement can be made that an increase in school enrolment and a decrease of missing school enrolment has a positive influence on the attraction of FDI to the textile sector in India. Furthermore, an increase in education positively influences the overall economic perspective and the nation's prosperity.

Model 5: Governance factors

The fifth model was designed to show the impact of the governmental performance on possible FDI attraction. For this purpose, six independent variables are designed: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law and control of corruption.

The R^2 is .331 (adjusted R^2 = .30) for the original data of the variable voice and accountability, indicative for a moderate goodness-of-fit as well as an adjusted R Square of .247 according to Cohen (1988). Furthermore, the value for the Durbin-Watson test is near 0, with a value of .772 for the original data. That shows that the model is auto-correlated. The model is not significant with a value of $p>.123$ for the pooled data. That means that of voice and accountability is not significant for the attraction of FDI.

The R^2 is .003 (adjusted R^2 = .10) for the original data of the variable political stability and absence of violence, indicative for no goodness-of-fit as well as an adjusted R Square of -.122 according to Cohen (1988). Furthermore, the value for the Durbin-Watson test is near 0, with a value of .369 for the original data. That shows that the model is positive auto-correlated the model is not significant with a value of $p>.888$ for the pooled data. That means that political stability and absence of violence is not significant for the attraction of FDI.

The R^2 is .04 (adjusted R^2 = .10) for the original data of the variable, government effectiveness, indicative for no goodness-of-fit as well as an adjusted R Square is -.120 according to Cohen (1988). Furthermore, the value for the Durbin-Watson test is near 0, with a value of .366 for the original data. That shows that the model is positive auto-correlated the model is not significant with a value of p>.797 for the pooled data. That means that government effectiveness is not significant for FDI attraction.

The R^2 is .110 (adjusted R^2 = .10) for the original data of the variable, regulatory quality, indicative for no goodness-of-fit as well as an adjusted R Square is -.002 according to Cohen (1988). Furthermore, the value for the Durbin-Watson test is near 0, with a value of .481 for the original data. That shows that the model is positive auto-correlated the model is not significant with a value of p> .302 for the pooled data. That means that regulatory quality is not significant for the attraction of FDI.

The R^2 is .070 (adjusted R^2 = .10) for the original data of the variable, rule of law, indicative for no goodness-of-fit as well as an adjusted R Square is -.047 according to Cohen (1988). Furthermore, the value for the Durbin-Watson test is near 0, with a value of .502 for the original data. That shows that the model is positive auto-correlated. The model is not significant with a value of p>.372 for the pooled data. That means that rule of law is not significant for the attraction of FDI

The R^2 is .013 (adjusted R^2 = .10) for the original data of the variable, control of corruption, indicative for no goodness-of-fit as well as an adjusted R Square is -.111 according to Cohen (1988). Furthermore, the value for the Durbin-Watson test is near 0, with a value of .347 for the original data. That shows that the model is positive auto-correlated. The model is not significant with a value of p>.728 for the pooled data. That means that control of corruption is not significant for FDI attraction.

Model 6: Infrastructure

The last model 'infrastructure' was designed to show the importance of modern infrastructure, attracting FDI to a specific country. A way to show the mobility and the connectivity of a population is the independent variable 'Individuals using the internet '.

The R^2 for the overall model is 0.801 (adjusted R^2 = .50), indicative for a high goodness-of-fit as well as an adjusted R Square was 0.789 for the original data according to Cohen (1988). Furthermore, the value for the Durbin-Watson test is near 1, with a value of 1.068 for the original data. This shows that the model is autocorrelated. The model is significant with a value of p< 0.000. That means that infrastructure is significant for FDI attraction.

4.3 Discussion of the results

The ANOVA was executed for six models. The first model was designed to show the general relation between export of textiles and FDI attraction. The second model investigates the effects of export-oriented textile production on water pollution. The third model displays the importance of macroeconomic factors for FDI attraction to the textile industry of India. The fourth model evaluates the effects of failed youth education on FDI attraction. The fifth model was designed to introduce an evaluation of the governmental performance for FDI attraction. The sixth model is an extension of the fifth model. It is observing the impact infrastructure on FDI attraction. In the following, the formulated hypotheses will be discussed.

H1: FDI inflow in Indian textile industry is increasing the Indian textile output

To answer the first hypothesis, export of textile goods was designed as the dependent variable and FDI as the independent variable. Furthermore, the first hypothesis is to state true. Due to a high goodness of fit as well as a high significance of the variable. Although, the model has a positive autocorrelation, it is unlikely that the residuals are dependent because of the independence of the measurement.

H2: An increase in textile output in India will lead to an increase in water pollution

For the second model the water pollution values were designed as the dependent variable and the export value as the independent variable. This model is the key component of the master`s thesis.

The ANOVA shows that the influence of textile export on B-Dis is not existing. That means that an increase in export-oriented textile production to industrial nations will not increase the water pollution. The regression analysis shows no significant influence of export oriented textile production on B-Dis.

For the second water pollution value BOD, (biochemical oxygen demand) the hypothesis is also rejected. BOD is the variable written for the water pollution by nitrates and phosphates. Both substances are used during the dyeing process of textile products. Due to that reason, it can not be confirmed that the dyeing of textile in India for the export market is increasing the concentration of phosphates and nitrates in Indian freshwater resources.

For the water quality indicator COD, (chemical oxygen demand), the hypothesis has to be rejected. COD stands for the emissions of pesticides to the freshwater resources. First of all, pesticides are used during the growing process of cotton. Furthermore, they can also be found in freshwater resources due to the textile washing processes of the supply chain.

Cl-Dis stands for chloride. Chloride is mainly used during the bleaching and dyeing process of textile products. The data shows no significance and no goodness-fit. Due to that reason, there is no influence of textile export production on the emitted amount of chloride. Hypothesis 2 has to be rejected.

Mg-Dis stands for Magnesium. Magnesium is used during all steps of the textile production process. The data shows no significance of goodness of fit. Due to that reason, there is no influence of textile export production on the emitted amount of magnesium. Hypothesis 2 has to be rejected for magnesium.

FDS represent minerals, which are used during the textile production process. These minerals are not that harmful to the human body, but they can be a threat for animal wildlife. The data shows no significant evidence for the influence of export-oriented textile production. Due to that reason the hypothesis has to be rejected.

TDS stands for total dissolved solids. It describes the amount of solved organic and inorganic solids in the freshwater resource of India. Moreover, it stands mostly for salts that are used during the textile production process. For that analysis the hypothesis has to be rejected. There is no significant influence of textile export production on TDS.

H3: An increase in Indian market potential will lead to an increase in Indian FDI inflow

The third hypothesis insinuates that an increase in market potential will increase the attraction of FDI to the Indian textile industry. Only GDP shows a high level of goodness of fit and a high significant influence on the FDI attraction to the Indian textile industry. Although, the Durbin-Watson statistic shows a positive autocorrelation. It is obvious that the residuals of the regression are independent due to the highly reliable official data source of the World Bank. Due to that reasons the third hypothesis has to be accepted for GDP as independent variable.

For the variable POP the hypothesis has to be rejected because of the low level of goodness-of-fit and the not existing significance of POP size for FDI attraction.

H4: A reduction in factor cost will increase FDI inflow

The fourth model insinuates the negative influence of school enrollment on FDI attraction to Indian textile production. School enrollment has a high goodness-of-fit and is also highly significant. Due to that reason the fourth hypothesis has to be accepted. It is clear that a decrease in factor costs will increase the FDI inflow to the Indian textile industry and to the contrary an increase in factor costs will lower the attraction of FDI inflow to the Indian textile industry.

H5: An increase in governance factors will increase Indian FDI inflow

The fifth hypothesis is the attempt to show the importance, of governmental performance, by the Indian government, for the attraction to the Indian textile industry. The model shows no goodness-of-fit or significance and has to be rejected for all six variables.

H6: An increase in Indian infrastructure will increase Indian FDI inflow

The six hypothesis is the extensions of the fifth. The six hypothesis has to be accepted due to the high level of goodness of fit and the highly significance. Although, the Durbin-Watson statistics shows autocorrelation it seems to be obvious that the residuals of the measurement and residuals are independent.

5. Conclusion and limitations

The last chapter represents the conclusion and discussion of the results of the ANOVA, executed by IBM´s SPSS software. The main purpose of this master's thesis was to analyze the effects of FDI on export-oriented textile production and the increase of water pollution in India.

5.1 Conclusion

The external validity of this master’s thesis is not very high. This corresponds to two main reasons. First, the master’s thesis is focused only on the textile industry. Due to the specific restrictions and the specialized supply chain, the results cannot be transferred to different industries. Second, the purpose of the master's thesis was to analyze the pollution haven hypothesis for water emissions. Today, most of the environmental topics deal with air emissions and CO2 avoidance. Nevertheless, the increase in water emissions in combination with an increase in FDI is a strong evidence for the pollution haven hypothesis. Furthermore, the textile industry in India is highly focused on the export to industrial nations, which offers a high range of income possibility and stimulation for economic prosperity.

The results of the six models, across the data set are very diverse. First of all, FDIs have a positive influence on the overall textile production in India. The fit and significance of the model is high, which was expected. Also, previous research implied the importance of FDI for production growth and economic development. The second model is dealing with the impact of export production growth on seven defined pollution values.

Firstly, none of the seven variables is significant for the original data or has a high goodness-of-fit for the pooled data. This shows, that an increase in textile production does not increase the water pollution. Secondly, the main hypothesis of this master's thesis is rejected for all of the seven variables.

For the third model, only the GDP is significant for the attraction of FDI. The size of the population has no significant effect on the attraction of FDI. However, Indian market outlooks play an important role for the economic perspective of the textile production and the profitability outlook of the industry.

For the fourth model, the hypothesis has to be accepted. Factor costs have a negative influence on the attraction of FDI. In addition, a decrease of factor costs will have a positive influence on the attraction of FDI.

For the fifth model, all of the six variables are rejected. None of the variables, has a high goodness-of-fit for the original data and is not significant for the pooled data of the model. Hence, governance factors do not play an important role for the attraction of FDI.

The hypothesis of the six model is stated true. The goodness-of-fit is high for the original data and the significance of the pooled data. A well-developed infrastructure has a positive influence on the attraction of FDI.

5.2 Limitations

Limitations of the model are highly affected by the limitations of the data set. First of all, the data is not specific for each kind of textile production substance. Due to that, only a general impression of the water quality in India occurs. Secondly, the model for the PHH is conducted from a macroeconomic perspective. Therefore, it is hard to detect water polluting companies. However, the model is able to provide a deeper inside on the ecological behavior of the textile industry sector. The most important limitation of the model and the data set is the dependence on the cooperation of the Indian government. GEMStat is providing the data basis. However, the water quality data is restrained by members of Indian governmental institutions. Also, the lack of information after the year 2008 on Indian water quality leaves a feeling of mistrust. Similarly, the data basis on environmental stringency deals with a lack of validity. For further research on government environmental policy, it is needed to collect more data on environmental stringency.

6. Suggestions for further research

The data analysis has shown divers results. First of all, the data is showing that attracting FDI to a specific industry sector can increase production and also has a positive influence on exports. That implies a possible generation of country-specific income and an overall increase in living standards for the local population. Nevertheless, the PHH for the Indian textile sector is rejected.

Further research should update the dataset. Also, further research should be more explicit for pesticides, bleachers and metals that are used for the textile production process.

Additionally, the industry policy of the Indian government for the Indian textile industry is unclear. Environmental regulation is important for the development of pollution caps.

For future research, data on the environmental stringency should be collected and analyzed. The environmental policy of India is difficult to foresee. Due to that, a valid environmental performance index should be designed. This Index should provide a comparison of environmental policy between nations.

The dependent variable ‘Export India’ was the attempt to include trade flows between industrial nations and developing nations. However, to achieve more valid results on the PHH, trade and capital flows have to be analyzed more precisely between income-inequal countries. This means that the foreign activity of companies from industrial nations have to be evaluated. For instance, the supply chain of industrial nations’ located companies needs to be analyzed. If the PHH is true, multinational companies will relocate their pollution intensive production to countries with less environmental regulation.

Additionally, the EKC postulates that development of a country has a positive influence on the environment of its industry. Due to that reason, it is confirmed that a minimal amount of economic development for each nation is necessary to provide ecological sustainability (Kuznets, 1955; Kuznets, 1963). Also, it is necessary to identify clean environmental, friendly concepts, which can be implemented by textile productions to avoid water emissions but enhance income and sustainable wealth.

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8. Appendix

8.1 Abstract

The aim of this master’s thesis was to research the pollution haven hypothesis for the textile industry in India. Countries with the least stringent environmental regulations, generate economic advantages by attracting FDI to an industry sector and allowing pollution havens. In order to research the water pollution in India, water emission values were requested from multinational organizations. The results of the master’s thesis show no significance for water emission values. In addition, inconsistent results are found for governance factors, macroeconomic factors and institutional settings. Not all variables are significant for the attraction of FDI and the increase in textile production in India.

Abstrakt

Ziel dieser Masterarbeit war es, die Hypothese des „pollution haven“ für die Textilindustrie in Indien zu untersuchen. Länder mit den am wenigsten strengen Umweltvorschriften erzielen wirtschaftliche Vorteile, indem sie ausländische Direktinvestitionen für einen Industriesektor ansprechen und Verschmutzungsgebiete zulassen. Für die Untersuchung der Wasserverschmutzung in Indien, wurden Wasseremissionswerte von multinationalen Organisationen angefordert. Die Ergebnisse der Masterarbeit zeigen keine Bedeutung für die sieben Wasseremissionswerte. Darüber hinaus werden widersprüchliche Ergebnisse für Governance-Faktoren, makroökonomische Faktoren und institutionelle Rahmenbedingungen gefunden. Nicht alle Variablen sind für die Attraktivität ausländischer Direktinvestitionen und die Zunahme der Textilproduktion in Indien von Bedeutung.

8.2 Models

8.2.1 Model 1: Export production

DV: Export

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,850[a]	,723	,707	103293148,82227	,705
1	1	,850[a]	,723	,707	103293148,82227	,705
2	1	,850[a]	,723	,707	103293148,82227	,705
3	1	,850[a]	,723	,707	103293148,82227	,705
4	1	,850[a]	,723	,707	103293148,82227	,705
5	1	,850[a]	,723	,707	103293148,82227	,705
6	1	,850[a]	,723	,707	103293148,82227	,705
7	1	,850[a]	,723	,707	103293148,82227	,705
8	1	,850[a]	,723	,707	103293148,82227	,705
9	1	,850[a]	,723	,707	103293148,82227	,705
10	1	,850[a]	,723	,707	103293148,82227	,705

a. Predictors: (Constant), FDI_in_India_Textile_Industry

b. Dependent Variable: Export_India

Table 2: Summary: Export Production

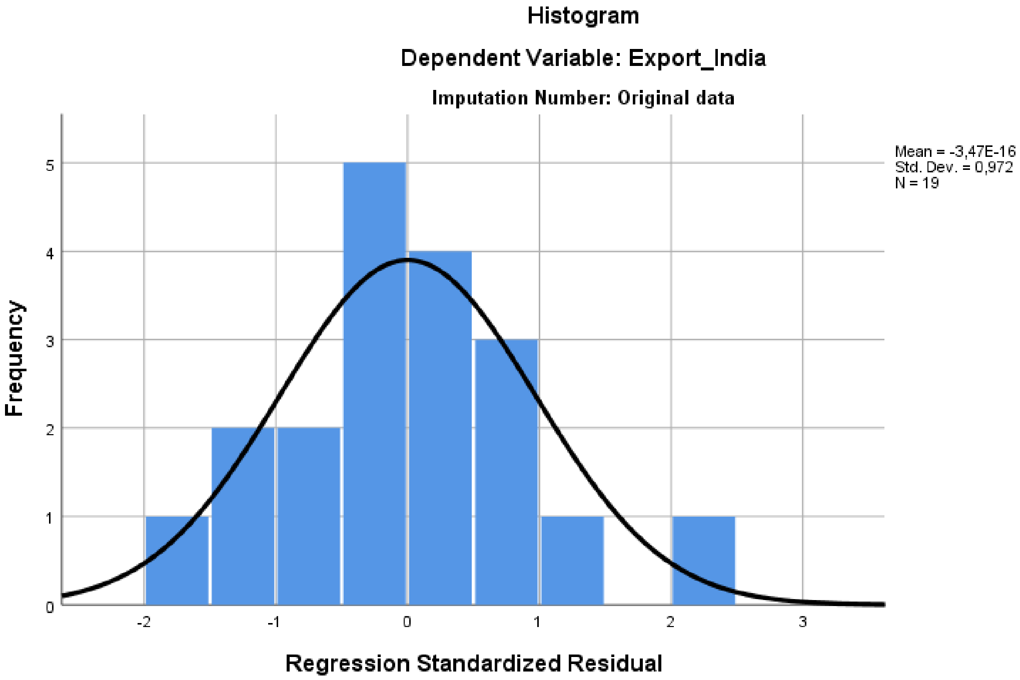

Figure 2: Histogram: Export production: FDI

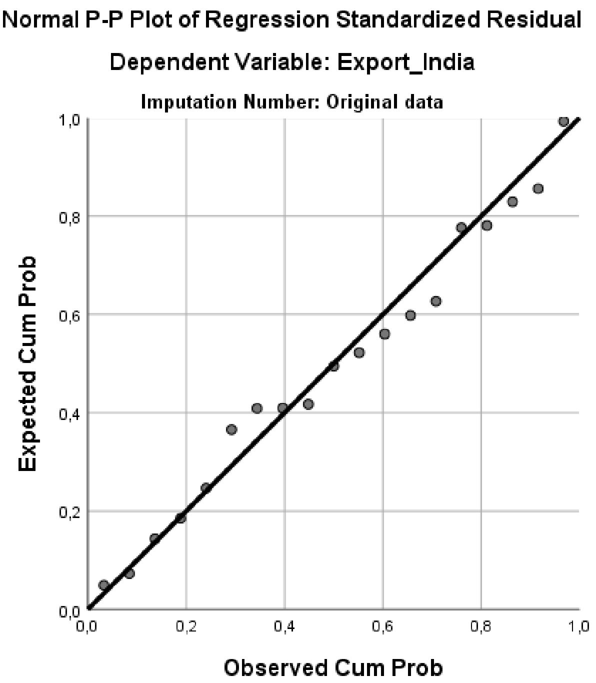

Figure 3: Normal P- P Plot: Export production: FDI

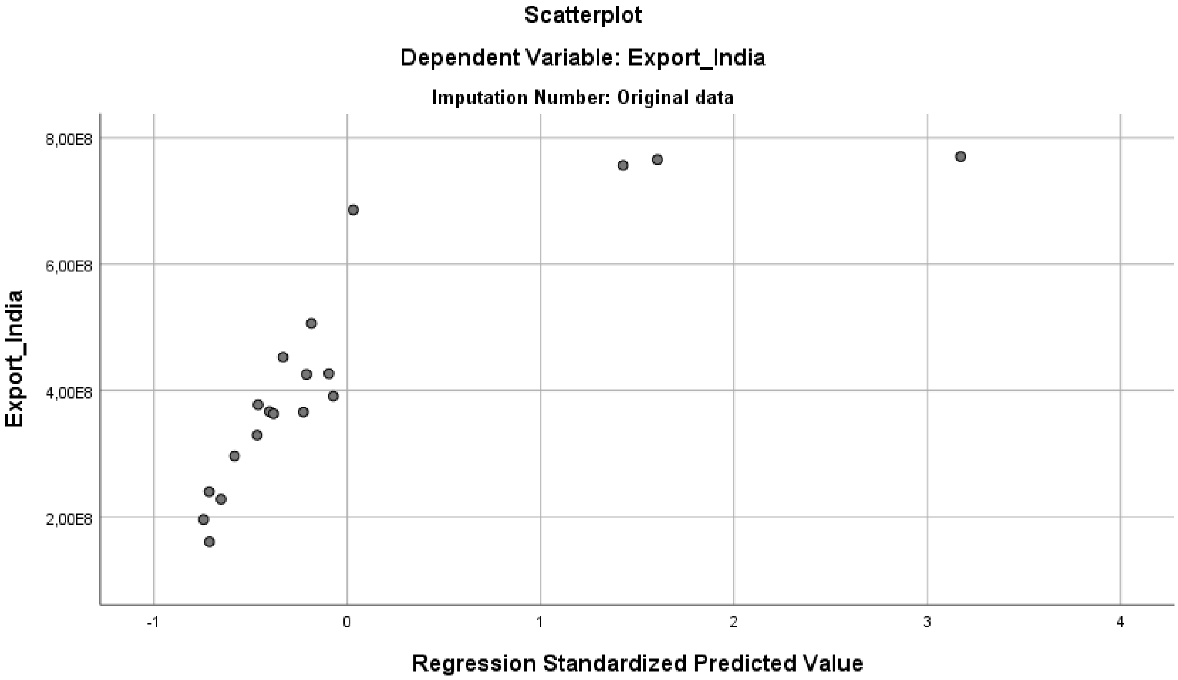

Figure 4: Scatterplot: Export production: FDI

			Unstandardized Coefficients		Standardized Coefficients		Correlations			Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Zero-order	Partial		Tolerance	VIF
Original data	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
1	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
2	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
3	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
4	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
5	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
6	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
7	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
8	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
9	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
10	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029	,850	,000	,850	,850	,850	1,000	1,000
Pooled	1	(Constant)	304095483,435	29997349,431		,000					
		FDI_in_India_Textile_Industry	,196	,029		,000	,850	,850	,850		

Table 3: Coefficients: Export production

8.2.2 Model 2: Water pollution

DV: B-Dis

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,105[a]	,011	-,051	,21239	1,926
1	1	,169[a]	,029	-,028	,23203	2,084
2	1	,151[a]	,023	-,035	,21636	2,026
3	1	,068[a]	,005	-,054	,21110	1,894
4	1	,118[a]	,014	-,044	,20657	1,951
5	1	,144[a]	,021	-,037	,21304	2,008
6	1	,068[a]	,005	-,054	,21110	1,894
7	1	,082[a]	,007	-,052	,20809	1,904
8	1	,068[a]	,005	-,054	,21110	1,894
9	1	,109[a]	,012	-,046	,20608	1,936
10	1	,073[a]	,005	-,053	,20992	1,897

a. Predictors: (Constant), Export_India

b. Dependent Variable: B-DIS

Table 4: Summary: Water pollution: B-DIS

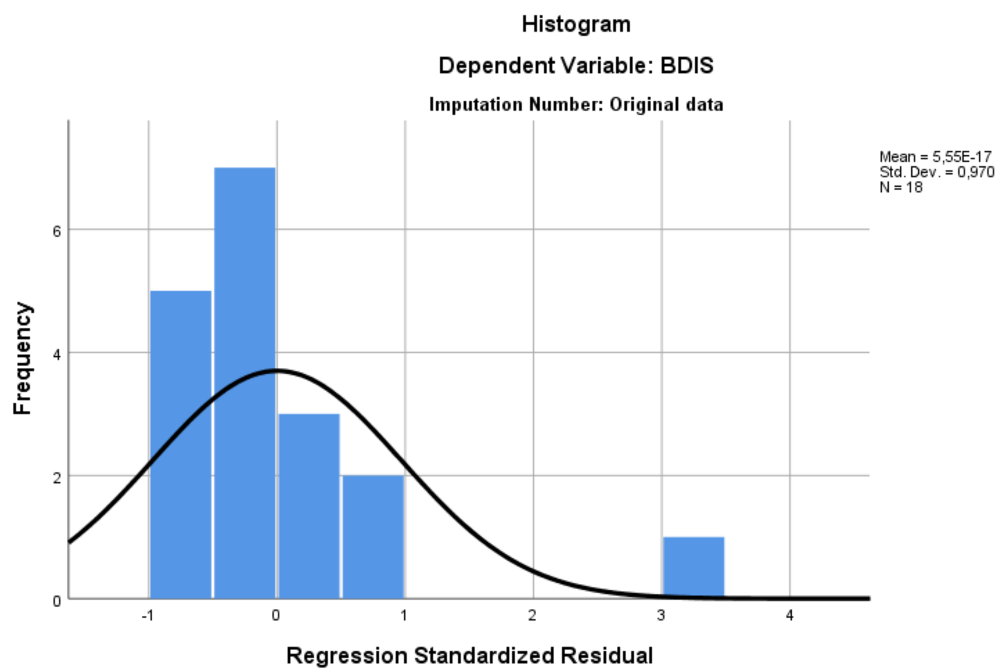

Figure 5: Histogram: Water pollution: B-DIS

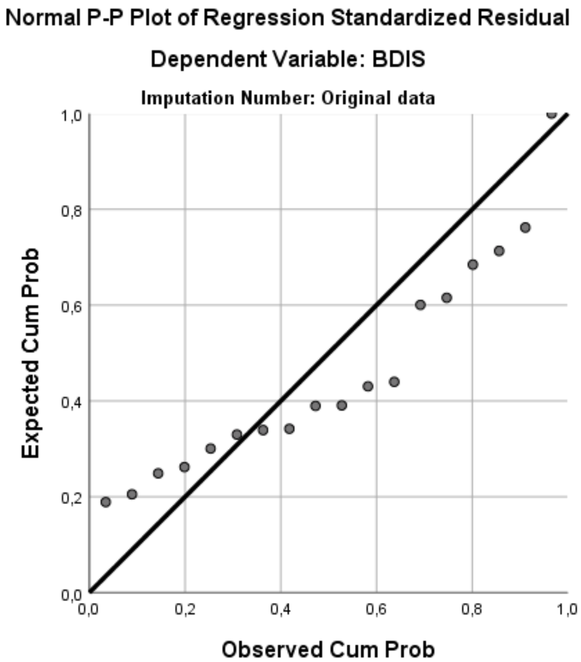

Figure 6: Normal P-P Plot: Water pollution: B-DIS

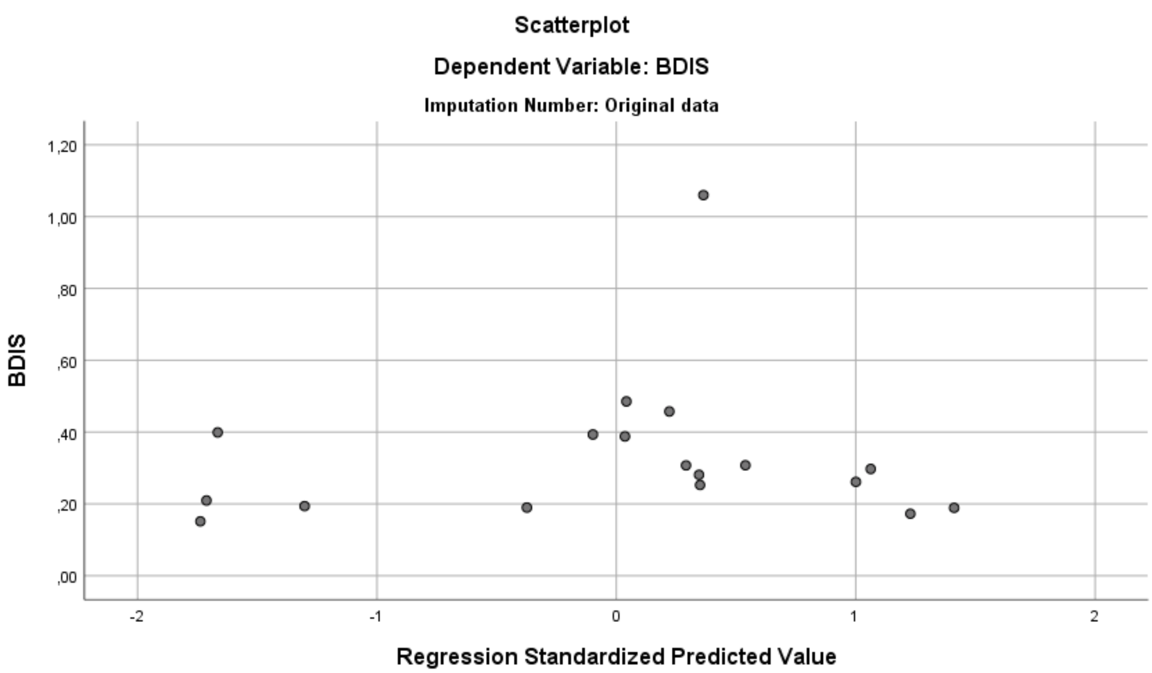

Figure 7: Scatterplot: Water pollution: B-DIS

			Unstandardized Coefficients		Standardized Coefficients		Correlations		Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF
Original data	1	(Constant)	,382	,126		,008				
		Export_India	-1,121E-10	,000	-,105	,679	-,105	-,105	1,000	1,000
1	1	(Constant)	,445	,133		,004				
		Export_India	-2,030E-10	,000	-,169	,488	-,169	-,169	1,000	1,000
2	1	(Constant)	,421	,124		,004				
		Export_India	-1,683E-10	,000	-,151	,537	-,151	-,151	1,000	1,000
3	1	(Constant)	,355	,121		,009				
		Export_India	-7,298E-11	,000	-,068	,783	-,068	-,068	1,000	1,000
4	1	(Constant)	,390	,119		,004				
		Export_India	-1,245E-10	,000	-,118	,632	-,118	-,118	1,000	1,000
5	1	(Constant)	,414	,122		,004				
		Export_India	-1,582E-10	,000	-,144	,556	-,144	-,144	1,000	1,000
6	1	(Constant)	,355	,121		,009				
		Export_India	-7,298E-11	,000	-,068	,783	-,068	-,068	1,000	1,000
7	1	(Constant)	,365	,120		,007				
		Export_India	-8,734E-11	,000	-,082	,738	-,082	-,082	1,000	1,000
8	1	(Constant)	,355	,121		,009				
		Export_India	-7,298E-11	,000	-,068	,783	-,068	-,068	1,000	1,000
9	1	(Constant)	,384	,118		,005				
		Export_India	-1,149E-10	,000	-,109	,657	-,109	-,109	1,000	1,000
10	1	(Constant)	,358	,121		,009				
		Export_India	-7,793E-11	,000	-,073	,767	-,073	-,073	1,000	1,000
Pooled	1	(Constant)	,384	,127		,003				
		Export_India	-1,153E-10	,000		,666	-,105	-,105		

Table 5: Coefficients: Water pollution: B-Dis

BOD

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,484[a]	,235	,187	3,85191	,732
1	1	,473[a]	,224	,178	3,76457	,822
2	1	,447[a]	,200	,153	3,86473	,948
3	1	,487[a]	,237	,192	3,73803	,761
4	1	,435[a]	,189	,142	3,92608	1,009
5	1	,499[a]	,249	,205	3,75775	,721
6	1	,449[a]	,202	,155	3,85606	,939
7	1	,471[a]	,222	,176	3,77204	,834
8	1	,503[a]	,253	,209	3,79020	,720
9	1	,492[a]	,242	,197	3,73756	,742
10	1	,492[a]	,242	,197	3,73762	,742

a. Predictors: (Constant), Export_India

b. Dependent Variable: BOD

Table 6: Summary: Water pollution: BOD

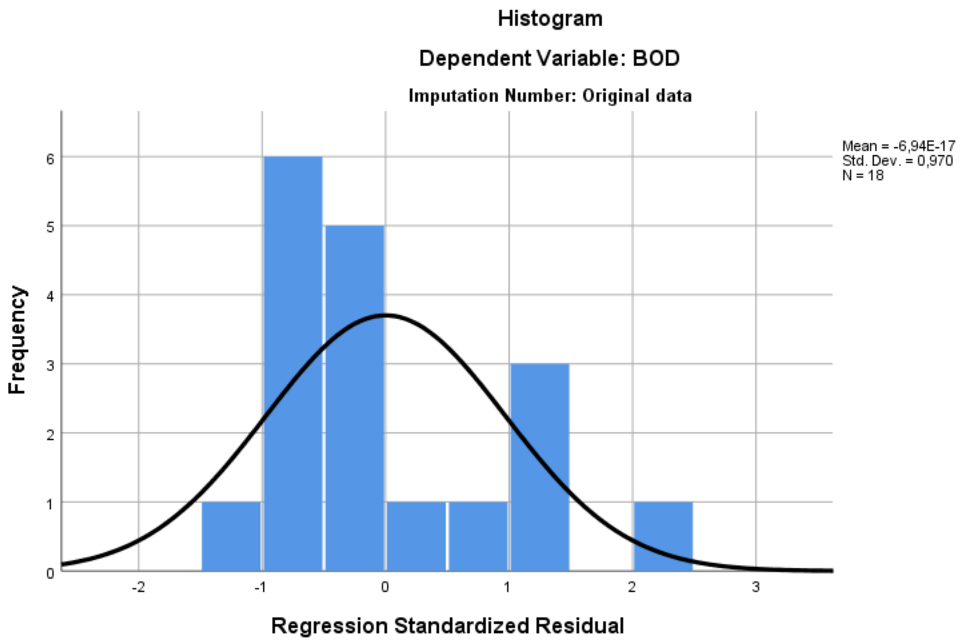

Figure 8: Histogram: Water pollution: BOD

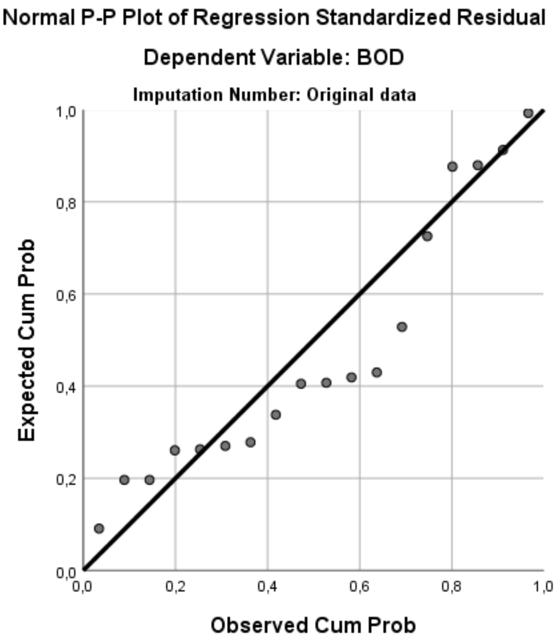

Figure 9: Normal P-P Plot: Water pollution: BOD

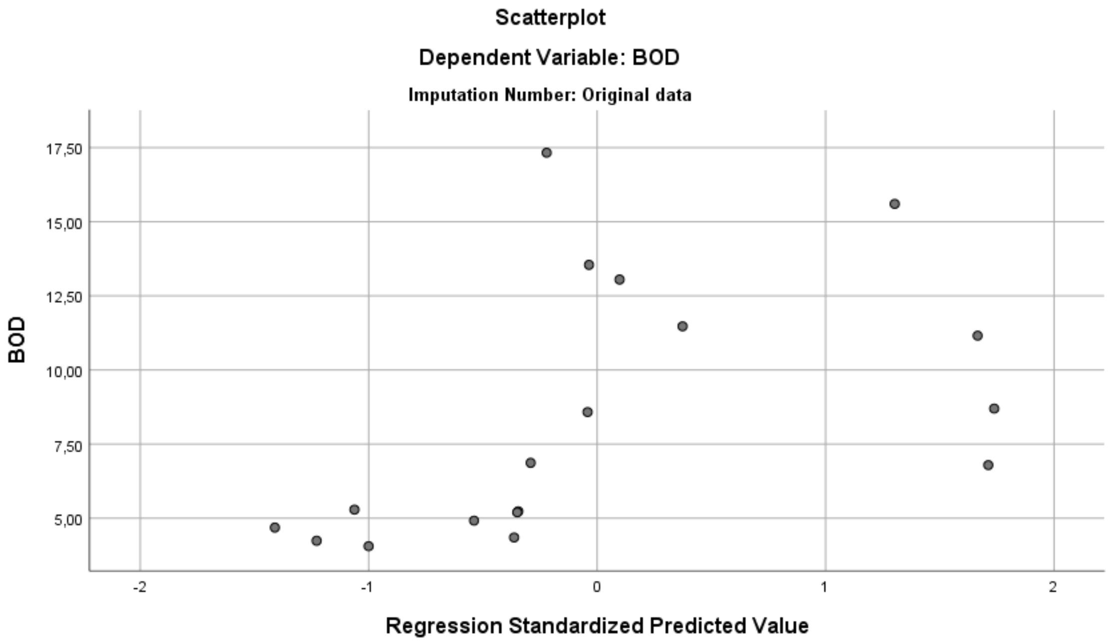

Figure 10: Scatterplot: Water pollution: BOD

Imputation Number	Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	Sig.	Correlations Partial	Correlations Part	Collinearity Statistics. Tolerance	Collinearity Statistics. VIF
Original data	1	(Constant)	3,755	2,282		,119				
		Export_India	1,069E-8	,000	,484	,042	,484	,484	1,000	1,000
1	1	(Constant)	4,023	2,164		,080				
		Export_India	1,030E-8	,000	,473	,041	,473	,473	1,000	1,000
2	1	(Constant)	4,336	2,222		,068				
		Export_India	9,847E-9	,000	,447	,055	,447	,447	1,000	1,000
3	1	(Constant)	3,809	2,149		,094				
		Export_India	1,061E-8	,000	,487	,035	,487	,487	1,000	1,000
4	1	(Constant)	4,465	2,257		,064				
		Export_India	9,661E-9	,000	,435	,063	,435	,435	1,000	1,000
5	1	(Constant)	3,521	2,160		,121				
		Export_India	1,102E-8	,000	,499	,030	,499	,499	1,000	1,000
6	1	(Constant)	4,316	2,217		,068				
		Export_India	9,876E-9	,000	,449	,054	,449	,449	1,000	1,000
7	1	(Constant)	4,058	2,168		,079				
		Export_India	1,025E-8	,000	,471	,042	,471	,471	1,000	1,000
8	1	(Constant)	3,381	2,179		,139				
		Export_India	1,123E-8	,000	,503	,028	,503	,503	1,000	1,000
9	1	(Constant)	3,713	2,149		,102				
		Export_India	1,075E-8	,000	,492	,033	,492	,492	1,000	1,000
10	1	(Constant)	3,711	2,149		,102				
		Export_India	1,075E-8	,000	,492	,033	,492	,492	1,000	1,000
Pooled	1	(Constant)	3,933	2,215		,076				
		Export_India	1,043E-8	,000		,027	,475	,475		

Table 7: Coefficients: Water pollution: BOD

COD

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,139[a]	,019	-,042	17,17357	1,071
1	1	,126[a]	,016	-,042	16,72609	1,129
2	1	,137[a]	,019	-,039	16,66469	1,098
3	1	,154[a]	,024	-,034	16,72185	1,068
4	1	,146[a]	,021	-,036	16,66932	1,080
5	1	,130[a]	,017	-,041	16,69353	1,116
6	1	,144[a]	,021	-,037	16,66501	1,082
7	1	,131[a]	,017	-,041	16,68927	1,114
8	1	,143[a]	,020	-,037	16,66219	1,085
9	1	,133[a]	,018	-,040	16,67854	1,108
10	1	,152[a]	,023	-,034	16,70329	1,070

a. Predictors: (Constant), Export_India

b. Dependent Variable: COD

Table 8: Summary: Water pollution: COD

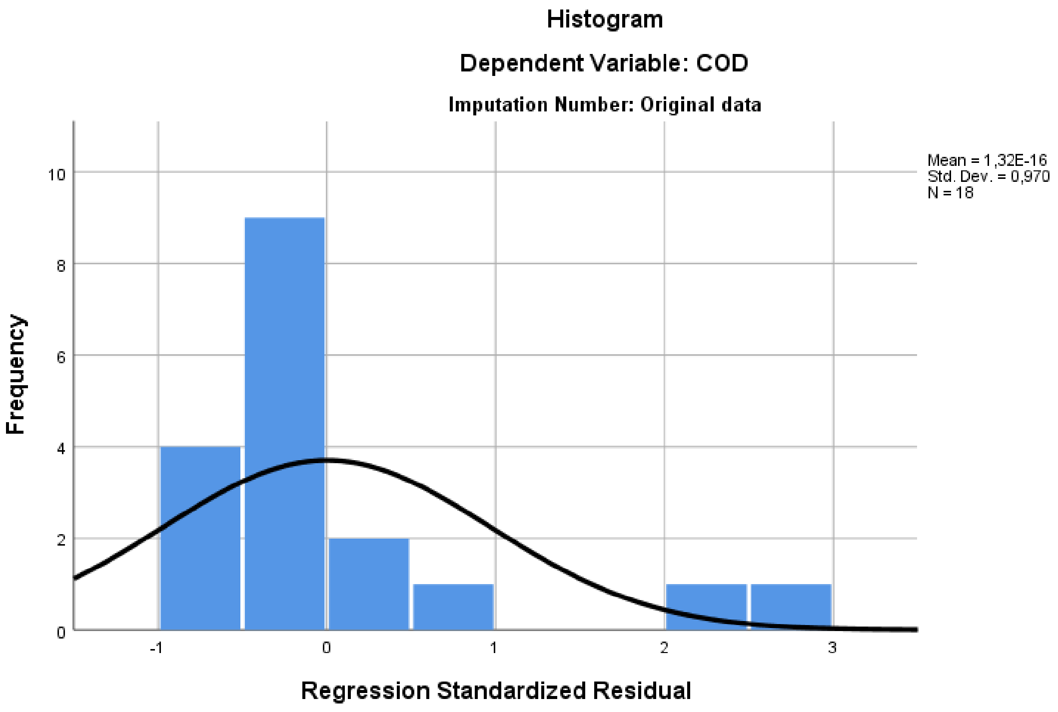

Figure 11: Histogram: Water pollution: COD

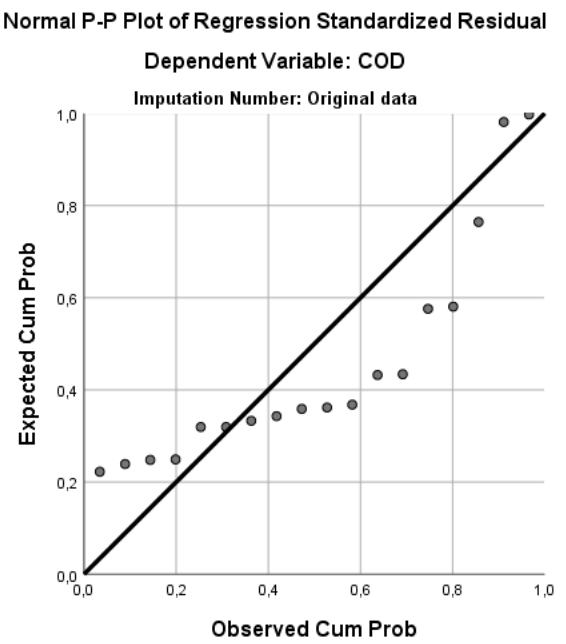

Figure 12: Normal P-P Plot: Water pollution: COD

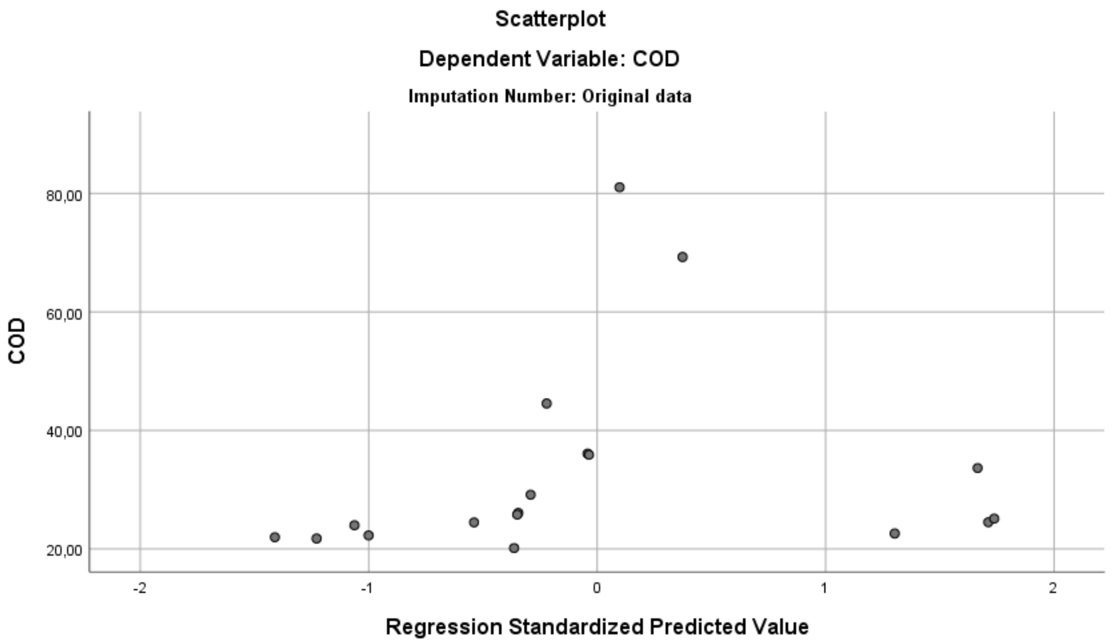

Figure 13: Scatterplot: Water pollution: COD

			Unstandardized Coefficients		Standardized Coefficients		Correlations		Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF
Original data	1	(Constant)	27,448	10,173		,016				
		Export_India	1,207E-8	,000	,139	,583	,139	,139	1,000	1,000
1	1	(Constant)	28,319	9,615		,009				
		Export_India	1,081E-8	,000	,126	,608	,126	,126	1,000	1,000
2	1	(Constant)	27,661	9,580		,010				
		Export_India	1,176E-8	,000	,137	,575	,137	,137	1,000	1,000
3	1	(Constant)	26,607	9,613		,013				
		Export_India	1,328E-8	,000	,154	,529	,154	,154	1,000	1,000
4	1	(Constant)	27,134	9,582		,012				
		Export_India	1,252E-8	,000	,146	,551	,146	,146	1,000	1,000
5	1	(Constant)	28,065	9,596		,009				
		Export_India	1,118E-8	,000	,130	,595	,130	,130	1,000	1,000
6	1	(Constant)	27,228	9,580		,011				
		Export_India	1,239E-8	,000	,144	,555	,144	,144	1,000	1,000
7	1	(Constant)	28,023	9,594		,010				
		Export_India	1,124E-8	,000	,131	,593	,131	,131	1,000	1,000
8	1	(Constant)	27,322	9,578		,011				
		Export_India	1,225E-8	,000	,143	,560	,143	,143	1,000	1,000
9	1	(Constant)	27,902	9,588		,010				
		Export_India	1,141E-8	,000	,133	,587	,133	,133	1,000	1,000
10	1	(Constant)	26,746	9,602		,013				
		Export_India	1,308E-8	,000	,152	,535	,152	,152	1,000	1,000
Pooled	1	(Constant)	27,501	9,612		,004				
		Export_India	1,199E-8	,000		,561	,140	,140		

Table 9: Coefficients: Water pollution: COD

Cl-Dis

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,097[a]	,009	-,053	22,48377	1,140
1	1	,099[a]	,010	-,048	21,81317	1,140
2	1	,106[a]	,011	-,047	21,83711	1,141
3	1	,099[a]	,010	-,048	21,81295	1,140
4	1	,108[a]	,012	-,047	21,85101	1,141
5	1	,088[a]	,008	-,051	21,84894	1,147
6	1	,079[a]	,006	-,052	21,95048	1,159
7	1	,096[a]	,009	-,049	21,81463	1,141
8	1	,097[a]	,009	-,049	21,81266	1,141
9	1	,109[a]	,012	-,046	21,86395	1,142
10	1	,095[a]	,009	-,049	21,81684	1,142

a. Predictors: (Constant), Export_India

b. Dependent Variable: CL_DIS

Table 10: Summary: Water pollution: Cl-Dis

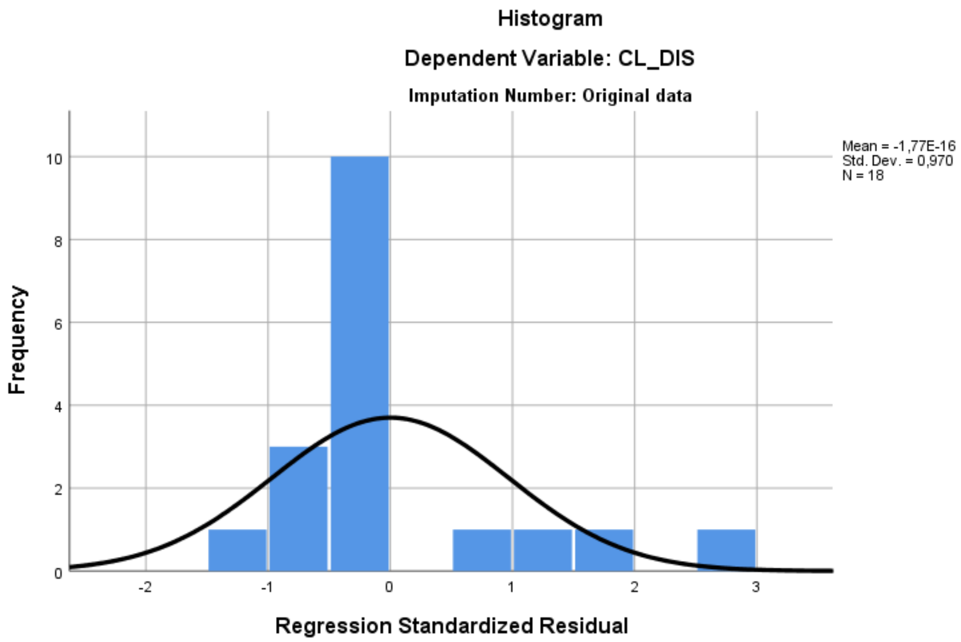

Figure 14: Histogram: Water pollution: Cl-Dis

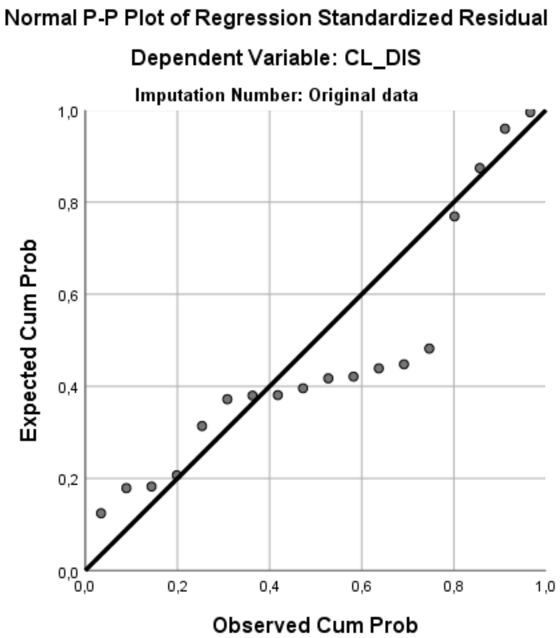

Figure 15: Normal P-P Plot: Water pollution: Cl-Dis

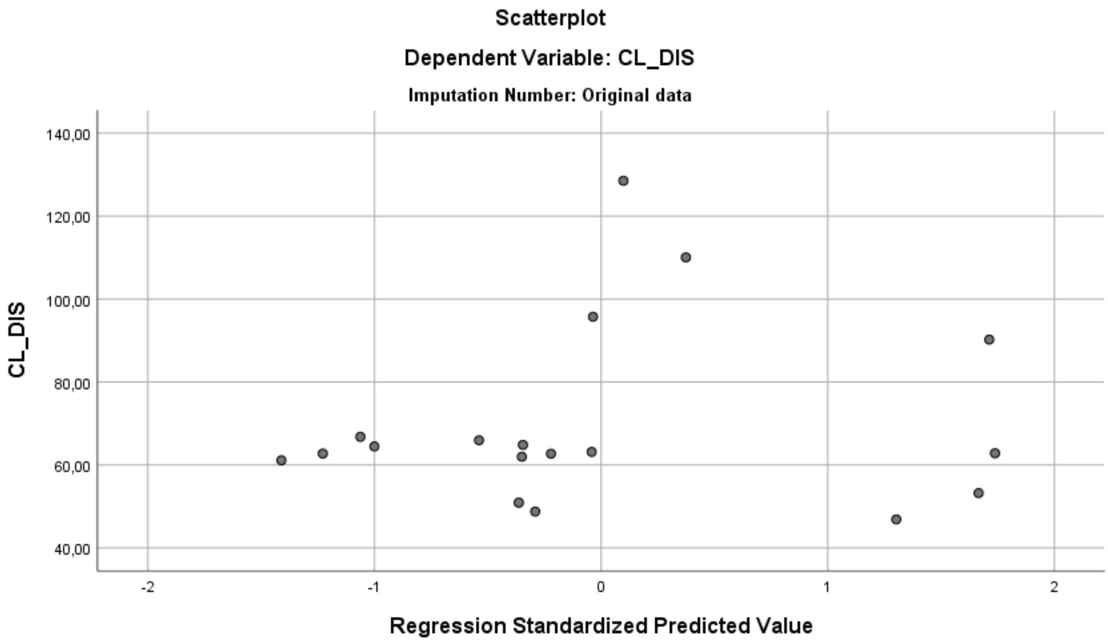

Figure 16: Scatterplot: Water pollution: Cl-Dis

			Unstandardized Coefficients		Standardized Coefficients		Correlations		Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF
Original data	1	(Constant)	65,298	13,319		,000				
		Export_India	1,095E-8	,000	,097	,702	,097	,097	1,000	1,000
1	1	(Constant)	65,194	12,539		,000				
		Export_India	1,110E-8	,000	,099	,685	,099	,099	1,000	1,000
2	1	(Constant)	64,686	12,553		,000				
		Export_India	1,184E-8	,000	,106	,666	,106	,106	1,000	1,000
3	1	(Constant)	65,212	12,539		,000				
		Export_India	1,108E-8	,000	,099	,686	,099	,099	1,000	1,000
4	1	(Constant)	64,532	12,561		,000				
		Export_India	1,206E-8	,000	,108	,661	,108	,108	1,000	1,000
5	1	(Constant)	66,042	12,560		,000				
		Export_India	9,878E-9	,000	,088	,719	,088	,088	1,000	1,000
6	1	(Constant)	66,747	12,618		,000				
		Export_India	8,859E-9	,000	,079	,748	,079	,079	1,000	1,000
7	1	(Constant)	65,479	12,540		,000				
		Export_India	1,069E-8	,000	,096	,696	,096	,096	1,000	1,000
8	1	(Constant)	65,353	12,539		,000				
		Export_India	1,087E-8	,000	,097	,692	,097	,097	1,000	1,000
9	1	(Constant)	64,413	12,569		,000				
		Export_India	1,223E-8	,000	,109	,656	,109	,109	1,000	1,000
10	1	(Constant)	65,555	12,542		,000				
		Export_India	1,058E-8	,000	,095	,699	,095	,095	1,000	1,000
Pooled	1	(Constant)	65,321	12,578		,000				
		Export_India	1,092E-8	,000		,686	,098	,098		

Table 11: Coefficients: Water pollution: Cl-Dis

Mg-Dis

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,004[a]	,000	-,062	18,16587	,944
1	1	,003[a]	,000	-,059	17,63781	1,101
2	1	,003[a]	,000	-,059	17,63908	1,098
3	1	,002[a]	,000	-,059	17,63660	1,103
4	1	,001[a]	,000	-,059	17,62735	1,125
5	1	,016[a]	,000	-,059	17,66739	1,251
6	1	,004[a]	,000	-,059	17,64353	1,091
7	1	,002[a]	,000	-,059	17,62507	1,135
8	1	,010[a]	,000	-,059	17,63289	1,197
9	1	,005[a]	,000	-,059	17,62388	1,162
10	1	,022[a]	,001	-,058	17,73079	1,310

a. Predictors: (Constant), Export_India

b. Dependent Variable: MG_DIS

Table 12: Summary: Water pollution: Mg-dis

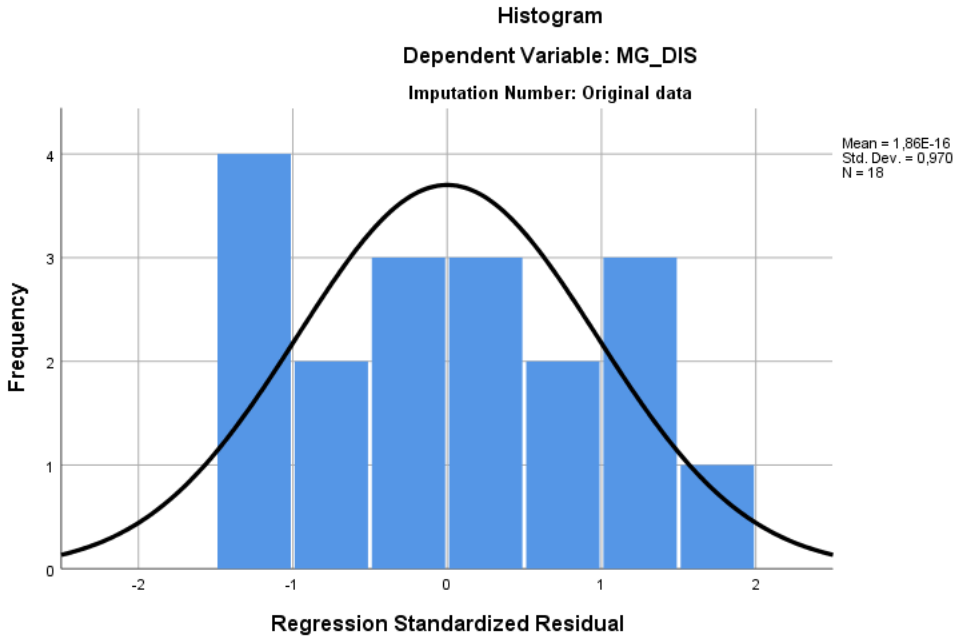

Figure 17: Histogram: Water pollution: Mg-Dis

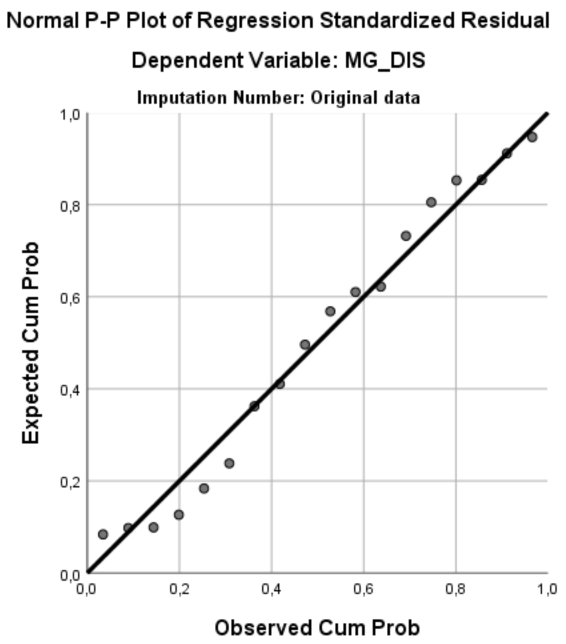

Figure 18: Normal P-P Plot: Water pollution: Mg-Dis

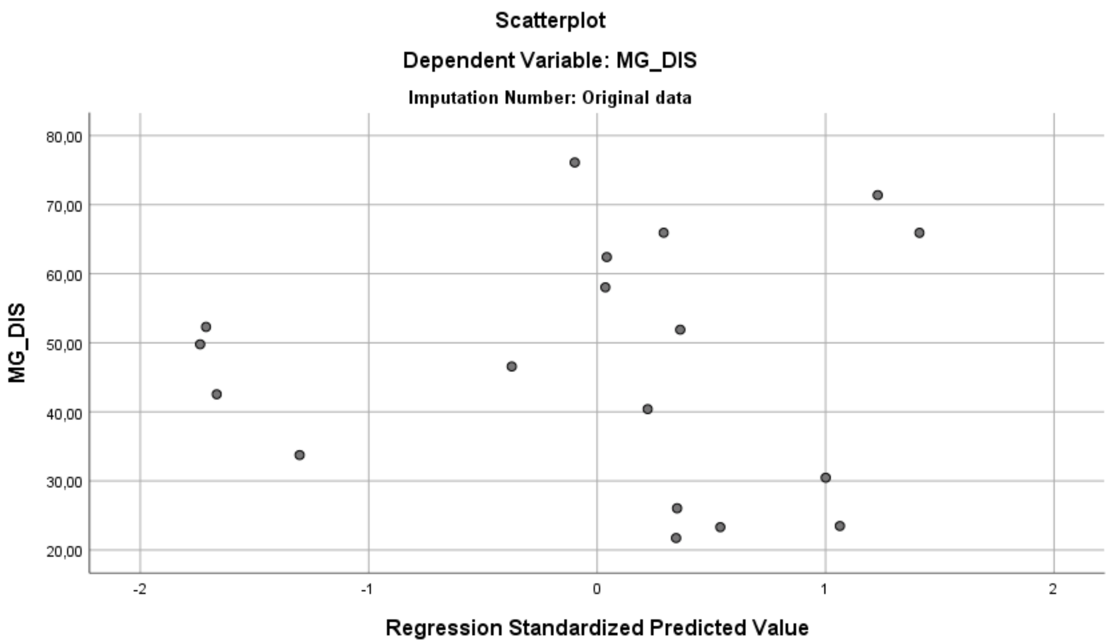

Figure 19: Scatterplot: Water pollution: Mg-Dis

			Unstandardized Coefficients		Standardized Coefficients		Correlations		.Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF
Original data	1	(Constant)	46,940	10,761		,000				
		Export_India	-3,700E-10	,000	-,004	,987	-,004	-,004	1,000	1,000
1	1	(Constant)	46,521	10,139		,000				
		Export_India	2,360E-10	,000	,003	,991	,003	,003	1,000	1,000
2	1	(Constant)	46,503	10,140		,000				
		Export_India	2,622E-10	,000	,003	,991	,003	,003	1,000	1,000
3	1	(Constant)	46,539	10,138		,000				
		Export_India	2,097E-10	,000	,002	,992	,002	,002	1,000	1,000
4	1	(Constant)	46,722	10,133		,000				
		Export_India	-5,508E-11	,000	-,001	,998	-,001	-,001	1,000	1,000
5	1	(Constant)	47,674	10,156		,000				
		Export_India	-1,431E-9	,000	-,016	,948	-,016	-,016	1,000	1,000
6	1	(Constant)	46,444	10,142		,000				
		Export_India	3,468E-10	,000	,004	,987	,004	,004	1,000	1,000
7	1	(Constant)	46,801	10,132		,000				
		Export_India	-1,684E-10	,000	-,002	,994	-,002	-,002	1,000	1,000
8	1	(Constant)	47,280	10,136		,000				
		Export_India	-8,610E-10	,000	-,010	,969	-,010	-,010	1,000	1,000
9	1	(Constant)	47,010	10,131		,000				
		Export_India	-4,714E-10	,000	-,005	,983	-,005	-,005	1,000	1,000
10	1	(Constant)	48,089	10,193		,000				
		Export_India	-2,031E-9	,000	-,022	,927	-,022	-,022	1,000	1,000
Pooled	1	(Constant)	46,958	10,161		,000				
		Export_India	-3,963E-10	,000		,986	-,004	-,004		

Table 13: Coefficients: Water pollution: Mg-Dis

FDS

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,047[a]	,002	-,060	44,15068	1,165
1	1	,043[a]	,002	-,057	42,84764	1,153
2	1	,041[a]	,002	-,057	42,86000	1,154
3	1	,045[a]	,002	-,057	42,83599	1,151
4	1	,044[a]	,002	-,057	42,83991	1,152
5	1	,051[a]	,003	-,056	42,84217	1,148
6	1	,054[a]	,003	-,056	42,86460	1,148
7	1	,051[a]	,003	-,056	42,84237	1,148
8	1	,045[a]	,002	-,057	42,83647	1,151
9	1	,053[a]	,003	-,056	42,86106	1,148
10	1	,051[a]	,003	-,056	42,84314	1,148

a. Predictors: (Constant), Export_India

b. Dependent Variable: FDS

Table 14: Summary: Water pollution: FDS

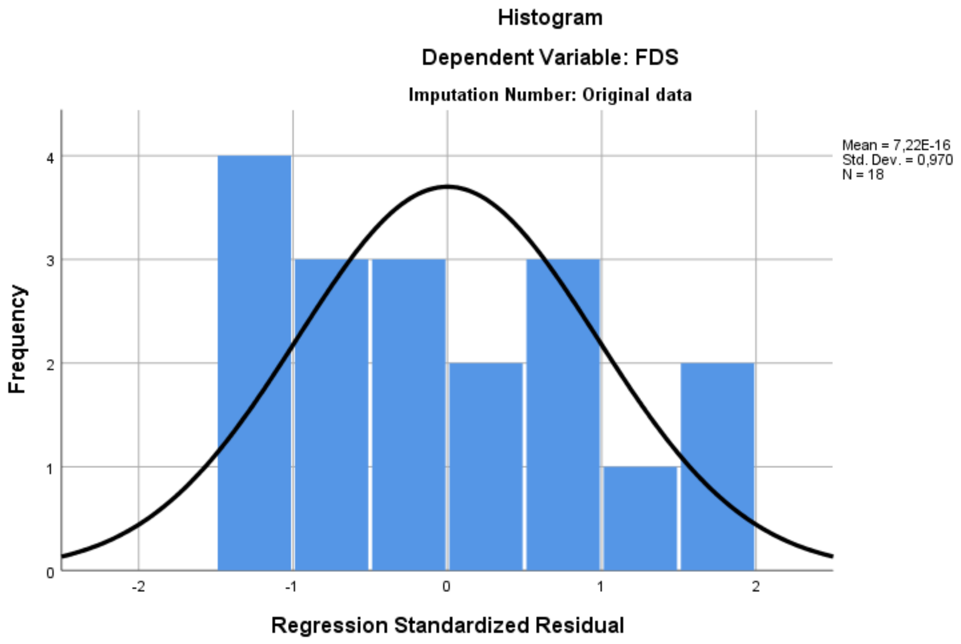

Figure 20: Histogram: Water pollution: FDS

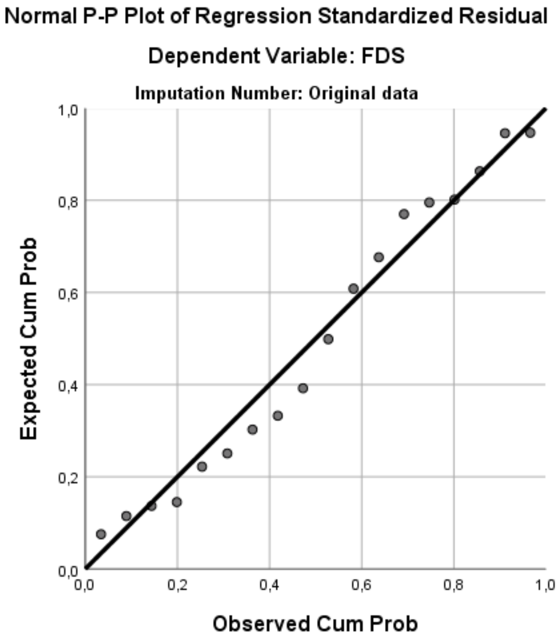

Figure 21: Normal P-P Plot: Water pollution: FDS

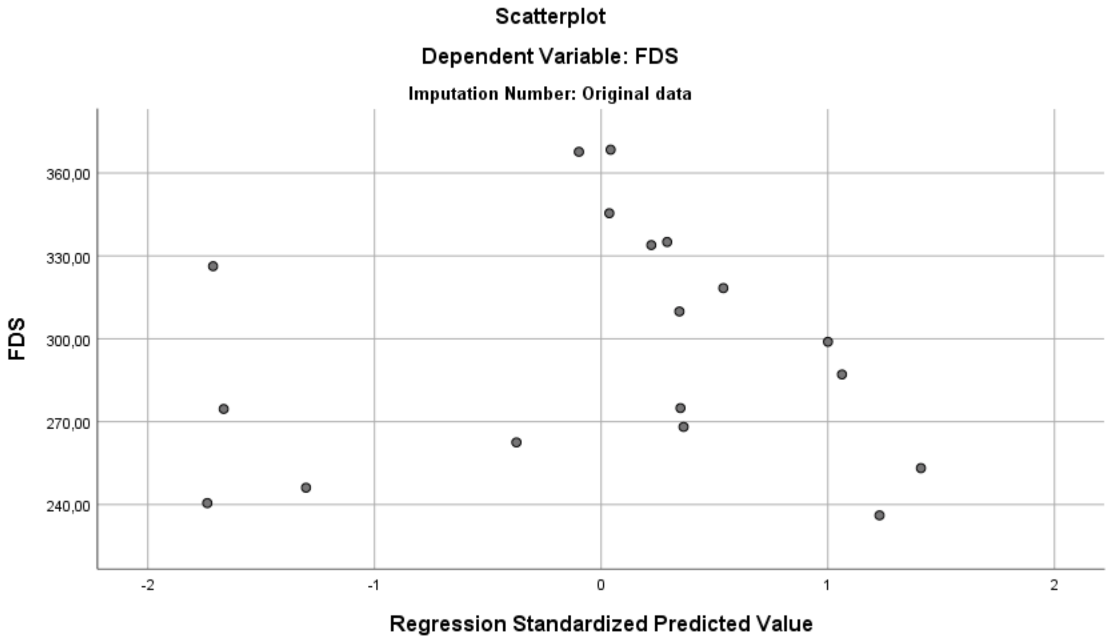

Figure 22: Scatterplot: Water pollution: FDS

			Unstandardized Coefficients		Standardized Coefficients		Correlations		Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF
Original data	1	(Constant)	301,550	26,154		,000				
		Export_India	-1,036E-8	,000	-,047	,854	-,047	-,047	1,000	1,000
1	1	(Constant)	300,877	24,631		,000				
		Export_India	-9,385E-9	,000	-,043	,861	-,043	-,043	1,000	1,000
2	1	(Constant)	300,644	24,638		,000				
		Export_India	-9,048E-9	,000	-,041	,866	-,041	-,041	1,000	1,000
3	1	(Constant)	301,225	24,624		,000				
		Export_India	-9,888E-9	,000	-,045	,854	-,045	-,045	1,000	1,000
4	1	(Constant)	301,079	24,627		,000				
		Export_India	-9,676E-9	,000	-,044	,857	-,044	-,044	1,000	1,000
5	1	(Constant)	302,088	24,628		,000				
		Export_India	-1,114E-8	,000	-,051	,836	-,051	-,051	1,000	1,000
6	1	(Constant)	302,529	24,641		,000				
		Export_India	-1,177E-8	,000	-,054	,827	-,054	-,054	1,000	1,000
7	1	(Constant)	302,094	24,628		,000				
		Export_India	-1,114E-8	,000	-,051	,836	-,051	-,051	1,000	1,000
8	1	(Constant)	301,204	24,625		,000				
		Export_India	-9,858E-9	,000	-,045	,854	-,045	-,045	1,000	1,000
9	1	(Constant)	302,474	24,639		,000				
		Export_India	-1,169E-8	,000	-,053	,828	-,053	-,053	1,000	1,000
10	1	(Constant)	302,115	24,629		,000				
		Export_India	-1,117E-8	,000	-,051	,835	-,051	-,051	1,000	1,000
Pooled	1	(Constant)	301,633	24,642		,000				
		Export_India	-1,048E-8	,000		,843	-,048	-,048		

Table 15: Coefficients: Water pollution: FDS

TDS

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,433[a]	,187	,129	38,57051	1,629
1	1	,332[a]	,110	,058	36,66174	1,607
2	1	,294[a]	,086	,033	37,32241	1,542
3	1	,328[a]	,108	,055	36,69231	1,595
4	1	,372[a]	,138	,087	36,12384	1,616
5	1	,360[a]	,129	,078	36,32238	1,667
6	1	,346[a]	,120	,068	36,51705	1,636
7	1	,346[a]	,120	,068	36,45528	1,595
8	1	,311[a]	,097	,043	37,05984	1,544
9	1	,326[a]	,106	,054	36,76044	1,659
10	1	,293[a]	,086	,032	37,36651	1,531

a. Predictors: (Constant), Export_India

b. Dependent Variable: TDS

Table 16: Summary: Water pollution: TDS

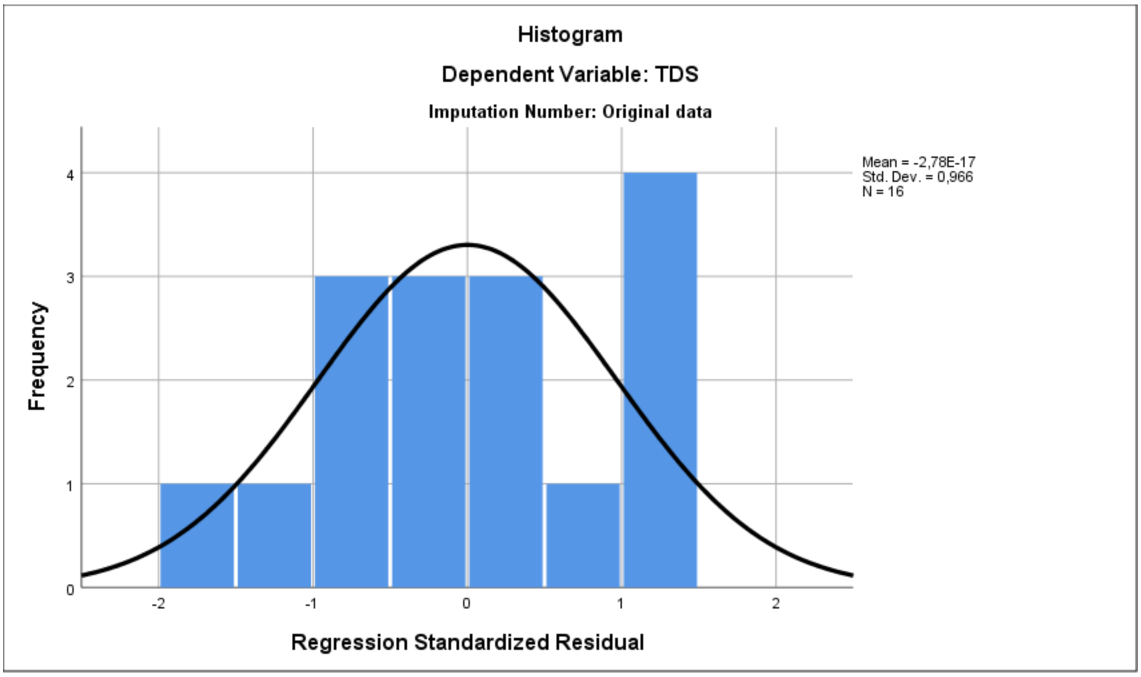

Figure 23: Histogram: Water pollution: TDS

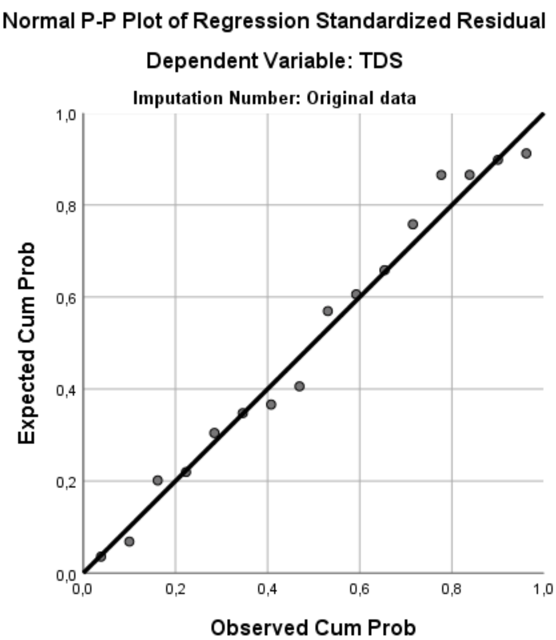

Figure 24: Normal P-P Plot: Water pollution: TDS

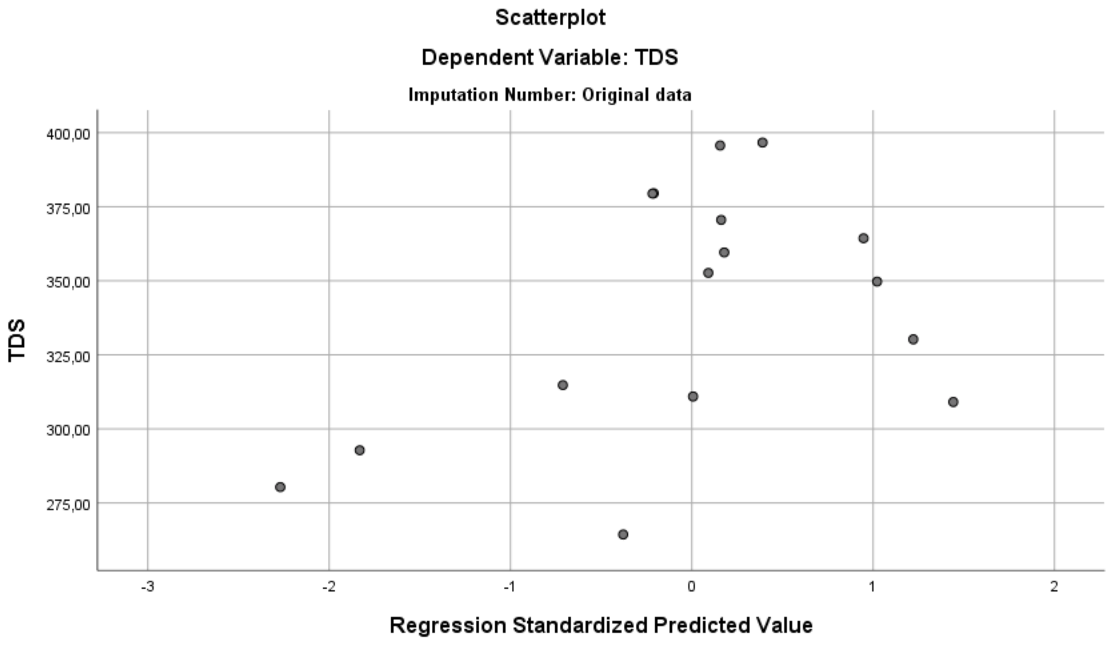

Figure 25: Scatterplot: Water pollution: TDS

Imputation Number	Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	Sig.	Correlations Partial	Correlations Part	Collinearity Statistics Tolerance	Collinearity Statistics VIF
Original data	1	(Constant)	384,371	26,174		,000				
		Export_India	-1,114E-7	,000	-,433	,094	-,433	-,433	1,000	1,000
1	1	(Constant)	369,145	21,075		,000				
		Export_India	-6,566E-8	,000	-,332	,165	-,332	-,332	1,000	1,000
2	1	(Constant)	366,599	21,455		,000				
		Export_India	-5,848E-8	,000	-,294	,222	-,294	-,294	1,000	1,000
3	1	(Constant)	368,595	21,093		,000				
		Export_India	-6,488E-8	,000	-,328	,170	-,328	-,328	1,000	1,000
4	1	(Constant)	371,659	20,766		,000				
		Export_India	-7,364E-8	,000	-,372	,117	-,372	-,372	1,000	1,000
5	1	(Constant)	370,510	20,880		,000				
		Export_India	-7,132E-8	,000	-,360	,130	-,360	-,360	1,000	1,000
6	1	(Constant)	370,100	20,992		,000				
		Export_India	-6,859E-8	,000	-,346	,147	-,346	-,346	1,000	1,000
7	1	(Constant)	370,138	20,956		,000				
		Export_India	-6,858E-8	,000	-,346	,146	-,346	-,346	1,000	1,000
8	1	(Constant)	367,836	21,304		,000				
		Export_India	-6,174E-8	,000	-,311	,195	-,311	-,311	1,000	1,000
9	1	(Constant)	367,671	21,132		,000				
		Export_India	-6,463E-8	,000	-,326	,173	-,326	-,326	1,000	1,000
10	1	(Constant)	367,316	21,480		,000				
		Export_India	-5,833E-8	,000	-,293	,223	-,293	-,293	1,000	1,000
Pooled	1	(Constant)	368,957	21,183		,000				
		Export_India	-6,558E-8	,000		,151	-,331	-,331		

Table 17: Coefficients: Water pollution: TDS

8.2.3 Model 3: Market potential

DV: FDI

IV: GDP

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,908[a]	,825	,814	356164067,37512	1,469
1	1	,908[a]	,825	,814	356164067,37512	1,469
2	1	,908[a]	,825	,814	356164067,37512	1,469
3	1	,908[a]	,825	,814	356164067,37512	1,469
4	1	,908[a]	,825	,814	356164067,37512	1,469
5	1	,908[a]	,825	,814	356164067,37512	1,469
6	1	,908[a]	,825	,814	356164067,37512	1,469
7	1	,908[a]	,825	,814	356164067,37512	1,469
8	1	,908[a]	,825	,814	356164067,37512	1,469
9	1	,908[a]	,825	,814	356164067,37512	1,469
10	1	,908[a]	,825	,814	356164067,37512	1,469

a. Predictors: (Constant), GDP

b. Dependent Variable: FDI_in_India_Textile_Industry

Table 18: Summary: Market potential: GDP

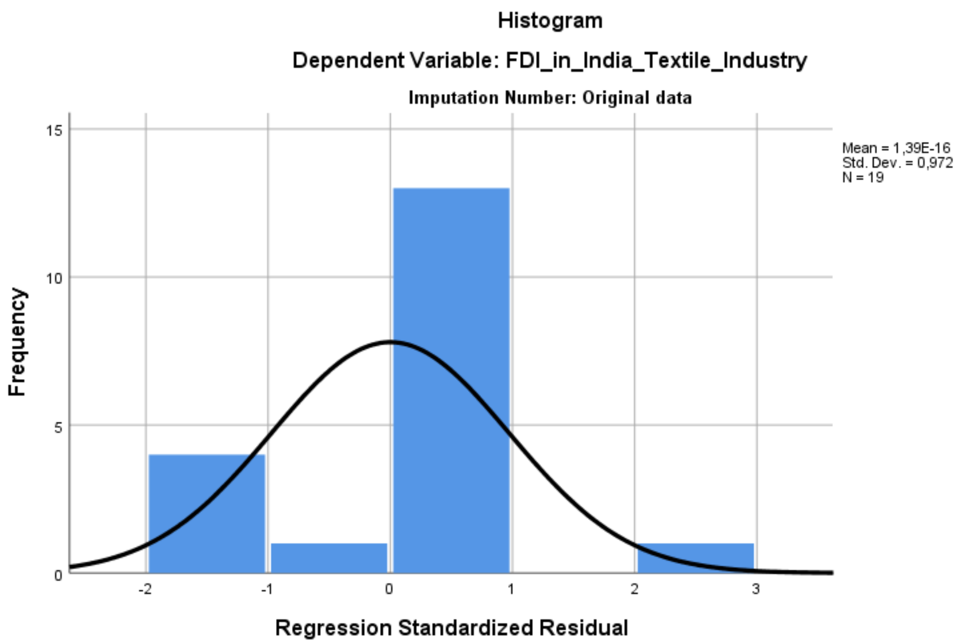

Figure 26: Histogram: Market potential: GDP

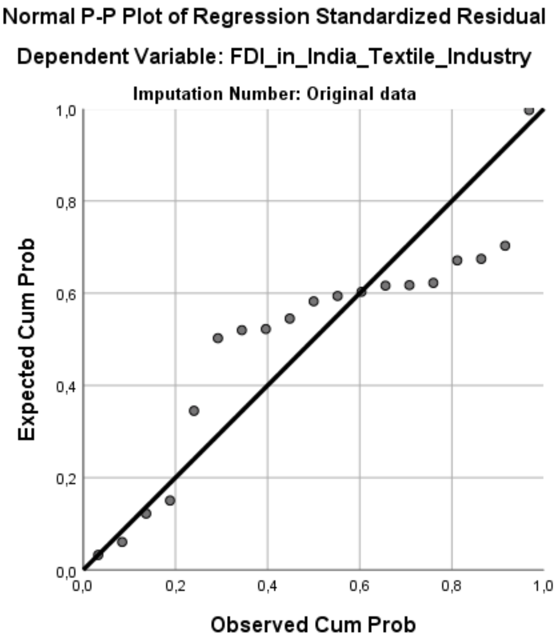

Figure 27: Normal P-P Plot: Market potential: GDP

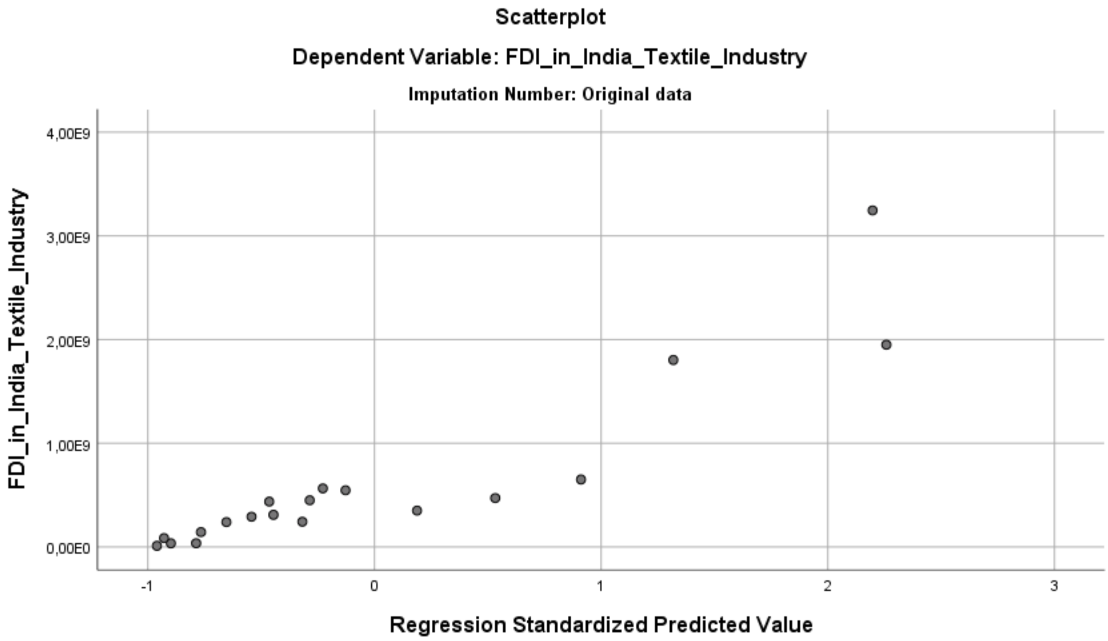

Figure 28: Scatterplot: Market potential: GDP

Imputation Number	Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	Sig.	Correlations Partial	Correlations Part	Collinearity Statistics Tolerance	Collinearity Statistics VIF
Original data	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
1	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
2	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
3	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
4	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
5	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
6	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
7	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
8	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
9	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
10	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000	,908	,000	,908	,908	1,000	1,000
Pooled	1	(Constant)	-784958439,723	177590524,884		,000				
		GDP	,003	,000		,000	,908	,908		

Table 19: Coefficients: Market potential: GDP

IV: POP

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,383[a]	,147	,097	785304041,50515	,568
1	1	,383[a]	,147	,097	785304041,50515	,568
2	1	,383[a]	,147	,097	785304041,50515	,568
3	1	,383[a]	,147	,097	785304041,50515,	,568
4	1	,383[a]	,147	,097	785304041,50515	,568
5	1	,383[a]	,147	,097	785304041,50515	,568
6	1	,383[a]	,147	,097	785304041,50515	,568
7	1	,383[a]	,147	,097	785304041,50515	,568
8	1	,383[a]	,147	,097	785304041,50515	,568
9	1	,383[a]	,147	,097	785304041,50515	,568
10	1	,383[a]	,147	,097	785304041,50515	,568

a. Predictors: (Constant), POP

b. Dependent Variable: FDI_in_India_Textile_Industry

Table 20: Summary: Market potential: POP

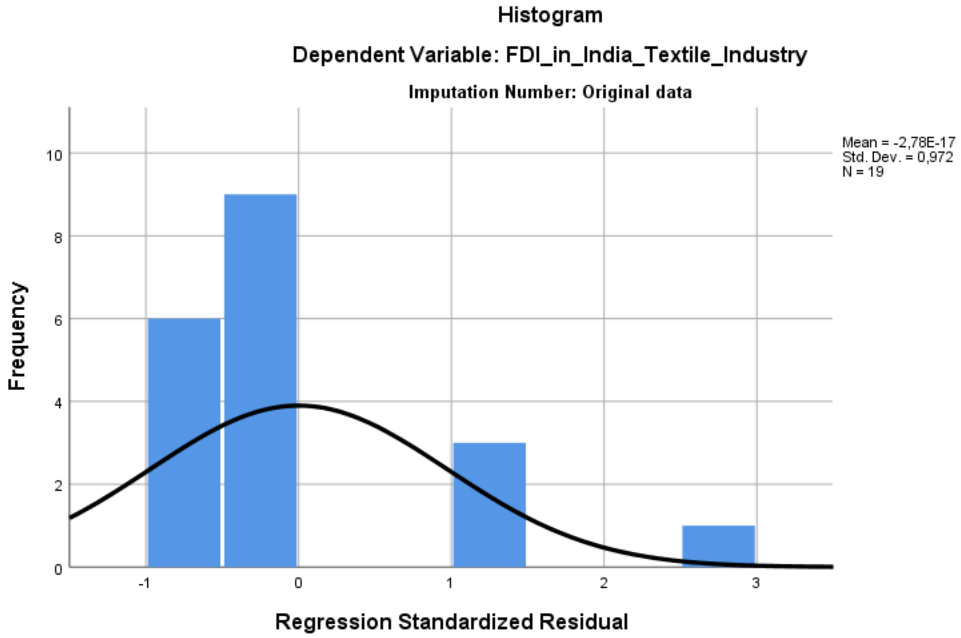

Figure 29: Histogram: Market potential: POP

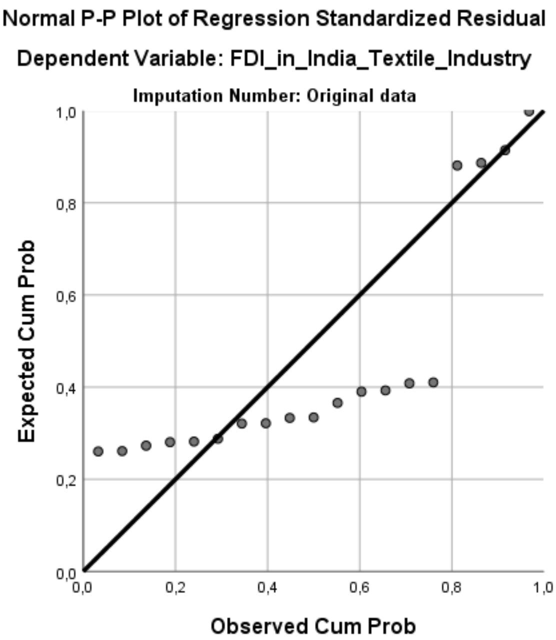

Figure 30: Normal P-P Plot: Market potential: POP

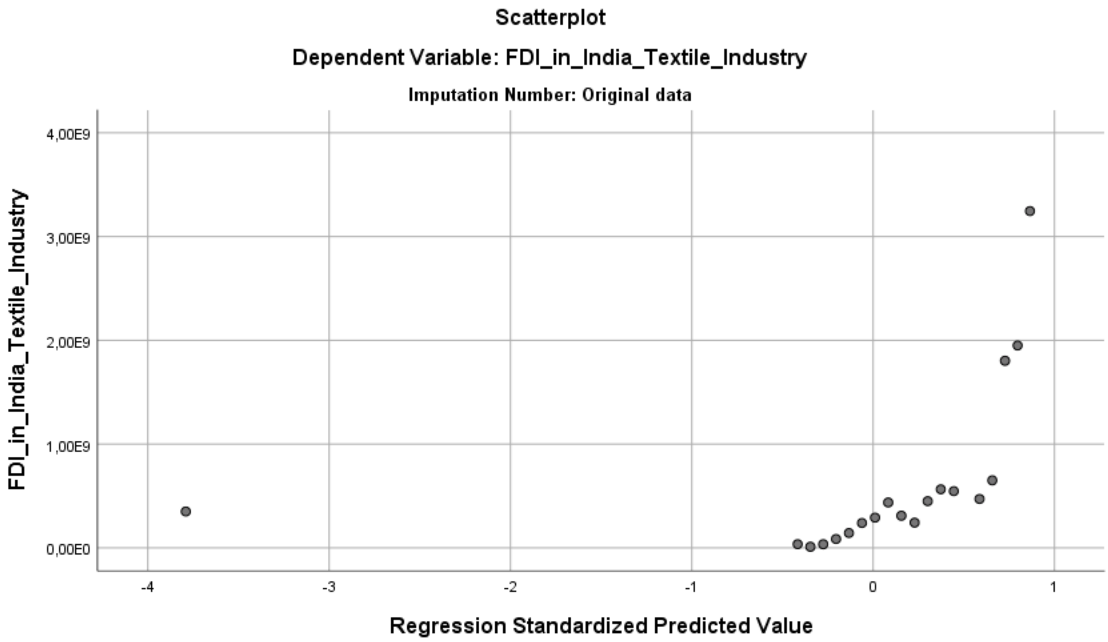

Figure 31: Scatterplot: Market potential: POP

			Unstandardized Coefficients		Standardized Coefficients		Correlations		. Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF
Original data	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
1	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
2	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
3	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
4	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
5	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
6	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
7	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
8	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
9	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
10	1	(Constant)	-589685499,957	732212997,214		,432				
		POP	1,239	,724	,383	,105	,383	,383	1,000	1,000
Pooled	1	(Constant)	-589685499,957	732212997,214		,421				
		POP	1,239	,724		,087	,383	,383		

Table 21: Coefficients: Market potential: POP

8.2.4 Model 4: Factor costs

DV: FDI

IV: Inverse School enrolment

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,892[a]	,796	,782	396545008,49034	1,569
1	1	,838[a]	,703	,685	463675180,89081	2,123
2	1	,794[a]	,630	,608	517044340,55399	1,657
3	1	,843[a]	,711	,694	457313712,49383	2,346
4	1	,879[a]	,772	,758	406046128,69781	2,031
5	1	,783[a]	,613	,590	528967653,55889	1,795
6	1	,839[a]	,704	,687	462428535,48997	2,324
7	1	,876[a]	,767	,753	410592729,66985	2,244
8	1	,855[a]	,731	,715	441231317,34320	1,692
9	1	,813[a]	,661	,641	494866826,27977	1,605
10	1	,794[a]	,631	,609	516332515,32248	1,876

a. Predictors: (Constant), Schoolenrollment

b. Dependent Variable: FDI_in_India_Textile_Industry

Table 22: Summary: Factor Costs: Inverse school enrollment

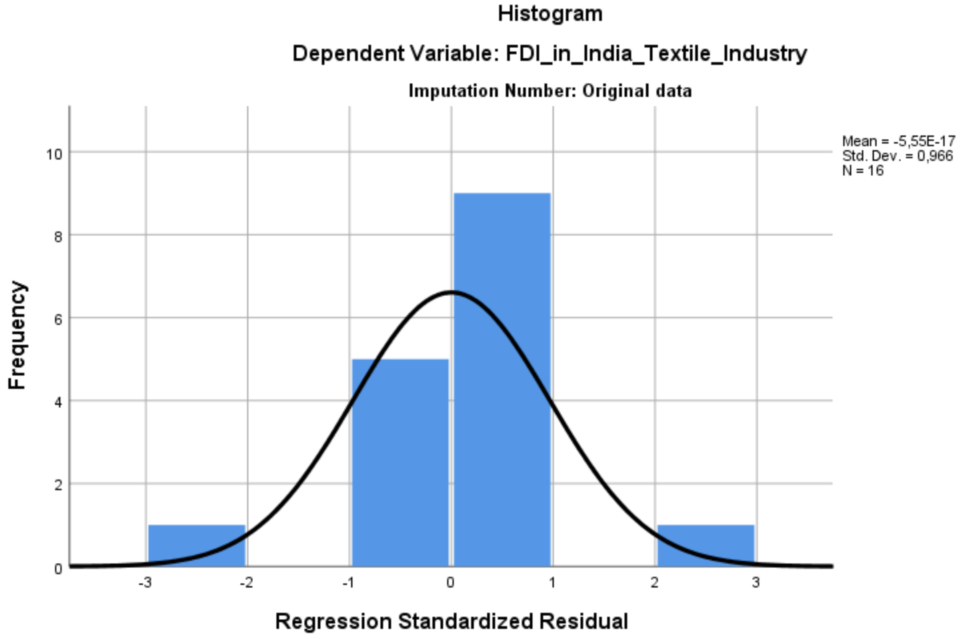

Figure 32: Histogram: Factor costs: Inverse school enrollment

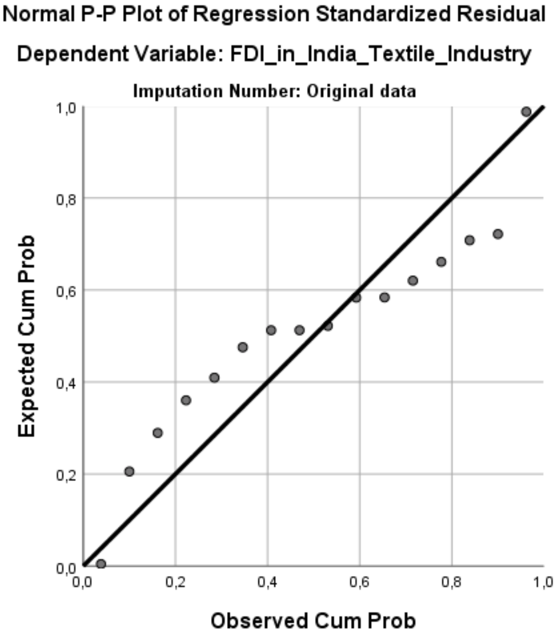

Figure 33: Normal P-P Plot: Factor costs: Inverse school enrollment

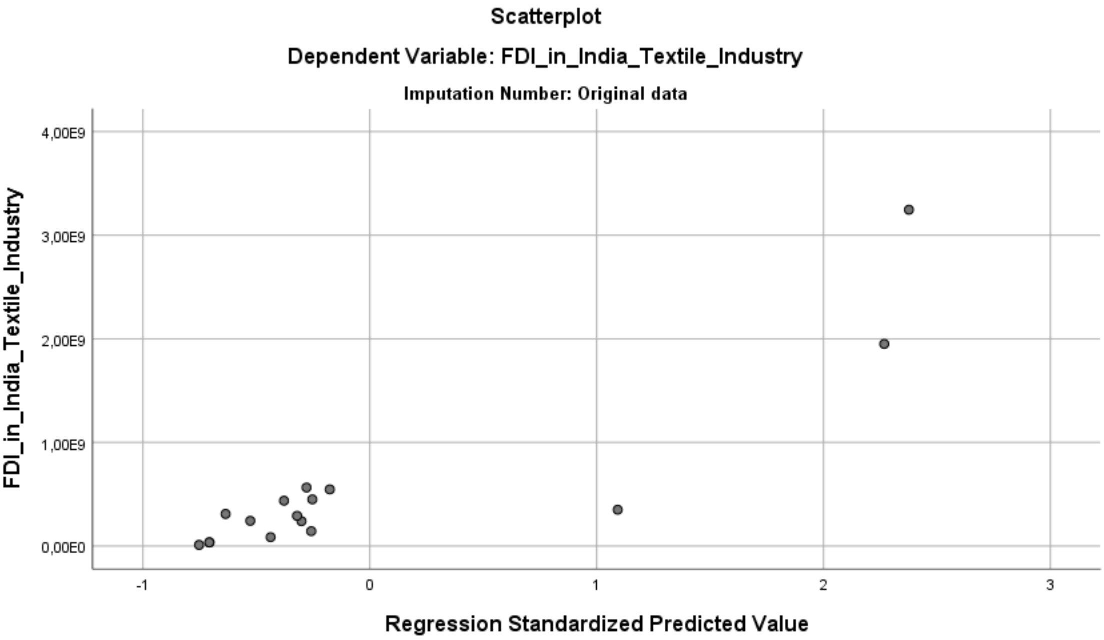

Figure 34: Scatterplot: Factor costs: Inverse school enrollment

			Unstandardized Coefficients		Standardized Coefficients		Correlations		. Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF
Original data	1	(Constant)	1061064552,512	120187660,221		,000				
		Schoolenrollment	121221621,070	16388080,284	,892	,000	,892	,892	1,000	1,000
1	1	(Constant)	1078119115,288	128245653,219		,000				
		Schoolenrollment	119650962,511	18881868,721	,838	,000	,838	,838	1,000	1,000
2	1	(Constant)	1065493267,726	144200898,989		,000				
		Schoolenrollment	112349033,494	20875252,110	,794	,000	,794	,794	1,000	1,000
3	1	(Constant)	1096668525,063	127880250,985		,000				
		Schoolenrollment	120586350,188	18661065,119	,843	,000	,843	,843	1,000	1,000
4	1	(Constant)	1133180916,518	114807752,523		,000				
		Schoolenrollment	125182062,498	16504166,486	,879	,000	,879	,879	1,000	1,000
5	1	(Constant)	1105395628,374	152740630,924		,000				
		Schoolenrollment	112182987,123	21623170,601	,783	,000	,783	,783	1,000	1,000
6	1	(Constant)	1142620084,606	133779814,064		,000				
		Schoolenrollment	120329137,047	18916345,885	,839	,000	,839	,839	1,000	1,000
7	1	(Constant)	1113242349,610	114684089,136		,000				
		Schoolenrollment	125376020,599	16770719,680	,876	,000	,876	,876	1,000	1,000
8	1	(Constant)	1093765959,517	122588412,621		,000				
		Schoolenrollment	121022918,212	17821068,699	,855	,000	,855	,855	1,000	1,000
9	1	(Constant)	1059272250,259	136362736,546		,000				
		Schoolenrollment	114505605,604	19879537,531	,813	,000	,813	,813	1,000	1,000
10	1	(Constant)	1073732665,800	144838460,118		,000				
		Schoolenrollment	113418456,576	21027973,245	,794	,000	,794	,794	1,000	1,000
Pooled	1	(Constant)	1096149076,276	135779871,685		,000				
		Schoolenrollment	118460353,385	19879023,144		,000	,834	,834		

Table 23: Coefficients: Factor Costs: Inverse school enrollment

8.2.5 Model 5: Governance factors

DV: FDI

IV: Political stability and absence of violence

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,052[a]	,003	-,122	1053351104,44357	,369
1	1	,013[a]	,000	-,059	850125320,84131	,262
2	1	,078[a]	,006	-,052	847572879,99776	,284
3	1	,102[a]	,010	-,048	845740934,17859	,302
4	1	,041[a]	,002	-,057	849461934,77511	,272
5	1	,001[a]	,000	-,059	850192489,68589	,263
6	1	,092[a]	,008	-,050	846624039,08979	,288
7	1	,027[a]	,001	-,058	849887267,38276	,268
8	1	,009[a]	,000	-,059	850155587,16131	,264
9	1	,013[a]	,000	-,059	850116750,40921	,262
10	1	,028[a]	,001	-,058	849850609,95751	,269

a. Predictors: (Constant), Political_Stability_and_Absence_of_Violence

b. Dependent Variable: FDI_in_India_Textile_Industry

Table 24: Summary: Governance factors: Political stability and absence of violence

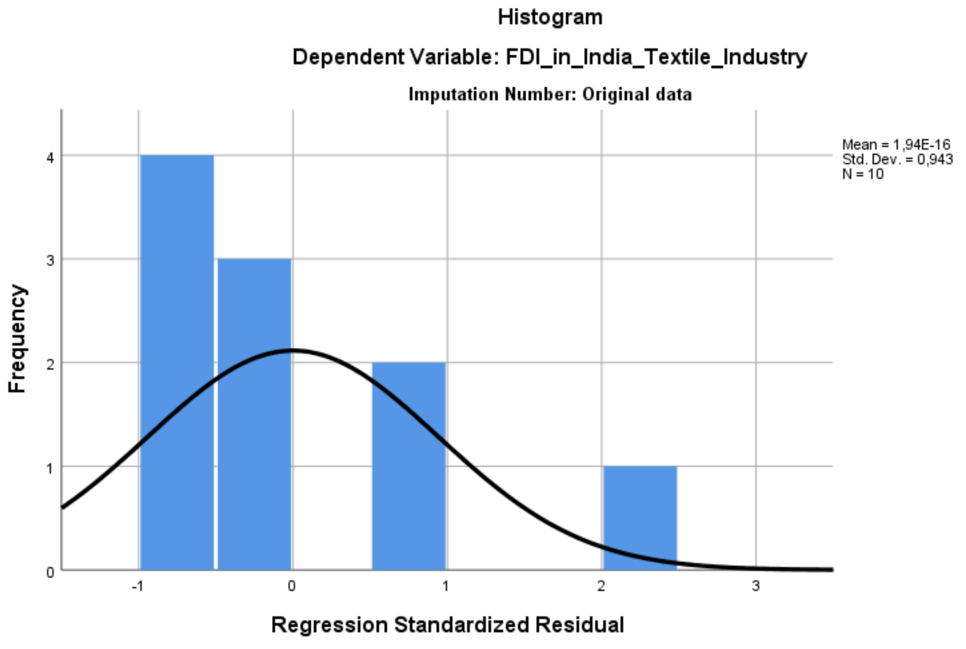

Figure 35: Histogram: Governance factors: Political stability and absence of violence

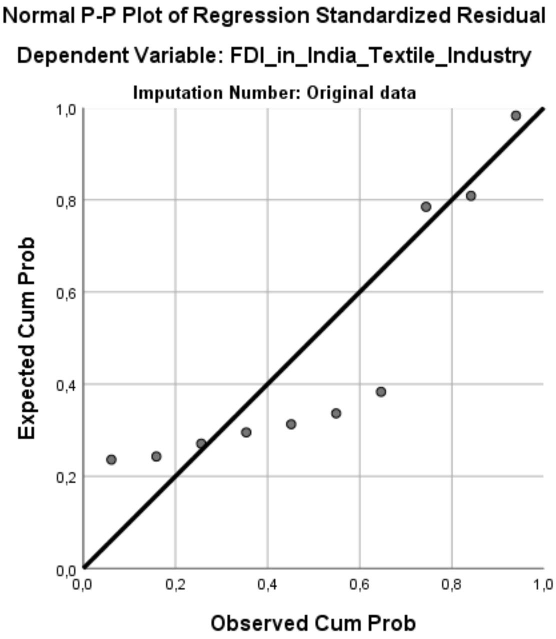

Figure 36: Normal P-P Plot: Governance factors: Political stability and absence of violence

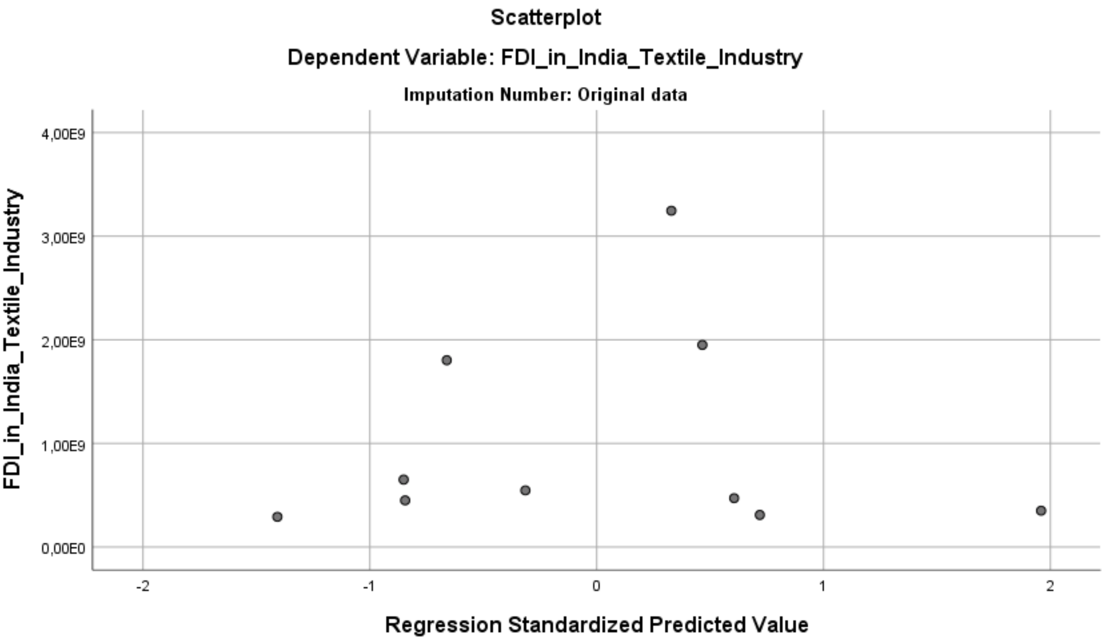

Figure 37: Scatterplot: Governance factors: Political stability and absence of violence

Imputation Number	Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	Sig.	Correlation Partial	Part	Collinearity Statistics Tolerance	VIF
Original data	1	(Constant)	1263114712,992	1778425967,415		,498				
		Political_Stability_and_Absence_of_Violence	-17177656,106	117033080,634	-,052	,887	-,052	-,052	1,000	1,000
1	1	(Constant)	558104116,993	1285620694,476		,670				
		Political_Stability_and_Absence_of_Violence	4458549,442	85735529,590	,013	,959	,013	,013	1,000	1,000
2	1	(Constant)	1007474988,386	1197258541,103		,412				
		Political_Stability_and_Absence_of_Violence	-25355622,304	78150647,344	-,078	,750	-,078	-,078	1,000	1,000
3	1	(Constant)	1150901047,899	1258432182,991		,373				
		Political_Stability_and_Absence_of_Violence	-34513512,498	81474154,994	-,102	,677	-,102	-,102	1,000	1,000
4	1	(Constant)	842628422,188	1291562141,328		,523				
		Political_Stability_and_Absence_of_Violence	-14462288,397	84531130,331	-,041	,866	-,041	-,041	1,000	1,000
5	1	(Constant)	629702408,265	1318116360,496		,639				
		Political_Stability_and_Absence_of_Violence	-370623,244	87601484,363	-,001	,997	-,001	-,001	1,000	1,000

6	1	(Constant)	1105243312,893	1284112285,717		,401				
		Political_Stability_and_Absence_of_Violence	-32080049,247	84647976,683	-,092	,709	-,092	-,092	1,000	1,000
7	1	(Constant)	764434339,509	1283049643,818		,559				
		Political_Stability_and_Absence_of_Violence	-9394679,680	84948908,145	-,027	,913	-,027	-,027	1,000	1,000
8	1	(Constant)	668643644,594	1166674122,847		,574				
		Political_Stability_and_Absence_of_Violence	-3046575,256	78826259,370	-,009	,970	-,009	-,009	1,000	1,000
9	1	(Constant)	556017594,889	1250230014,094		,662				
		Political_Stability_and_Absence_of_Violence	4666885,522	84542909,327	,013	,957	,013	,013	1,000	1,000
10	1	(Constant)	775022309,440	1303418346,884		,560				
		Political_Stability_and_Absence_of_Violence	-10009208,311	85519874,594	-,028	,908	-,028	-,028	1,000	1,000
Pooled	1	(Constant)	805817218,506	1285131702,971		,531				
		Political_Stability_and_Absence_of_Violence	-12010712,397	85003962,484		,888	-,035	-,035		

Table 25: Coefficients: Governance factors: Political stability and absence of violence

IV: Voice and Accountability

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,575[a]	,331	,247	862990680,73571	,772
1	1	,413[a]	,170	,122	774389370,63305	,534
2	1	,440[a]	,194	,146	763336380,66525	,399
3	1	,369[a]	,136	,085	790347669,05104	,436
4	1	,536[a]	,288	,246	717536801,56205	,801
5	1	,427[a]	,182	,134	768953017,47827	,630
6	1	,317[a]	,100	,048	806344258,48757	,385
7	1	,395[a]	,156	,106	781153085,51408	,425
8	1	,376[a]	,141	,090	787966496,19000	,442
9	1	,293[a]	,086	,032	812902270,42517	,370
10	1	,230[a]	,053	-,003	827324262,38967	,296

a. Predictors: (Constant), Voice_and_Accountability

b. Dependent Variable: FDI_in_India_Textile_Industry

Table 26: Summary: Governance Factors: Voice and accountability

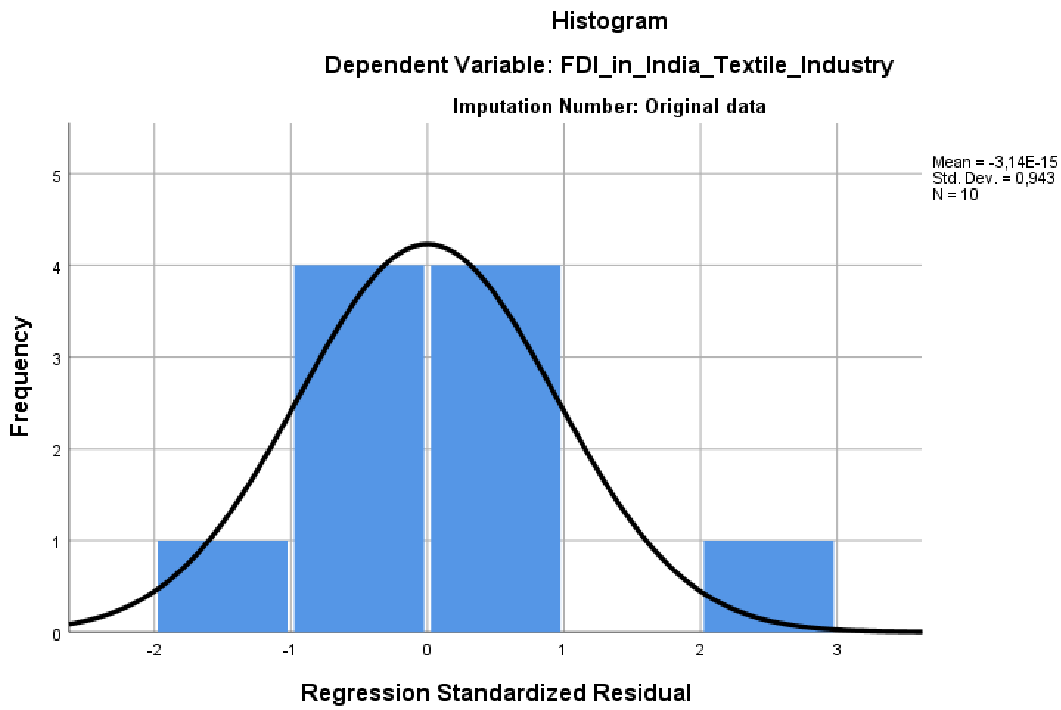

Figure 38: Histogram: Governance factors: Voice and accountability

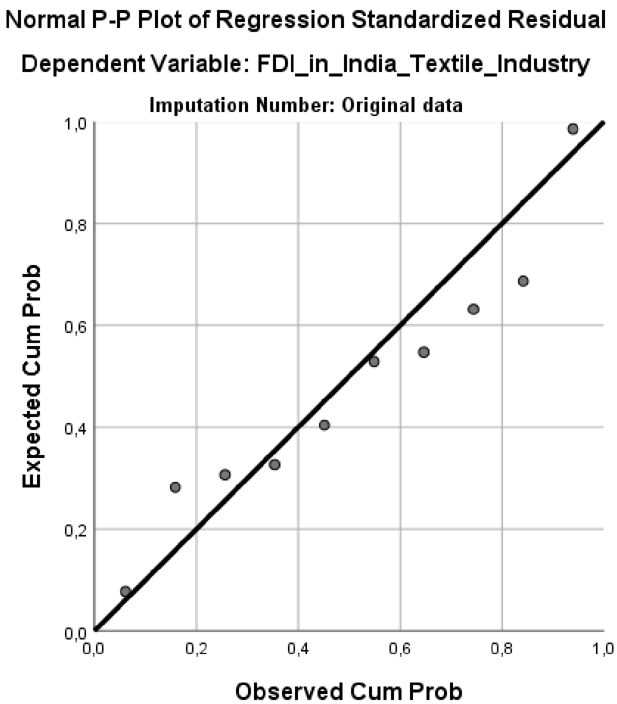

Figure 39: Normal P-P Plot: Governance Factors: Voice and Accountability

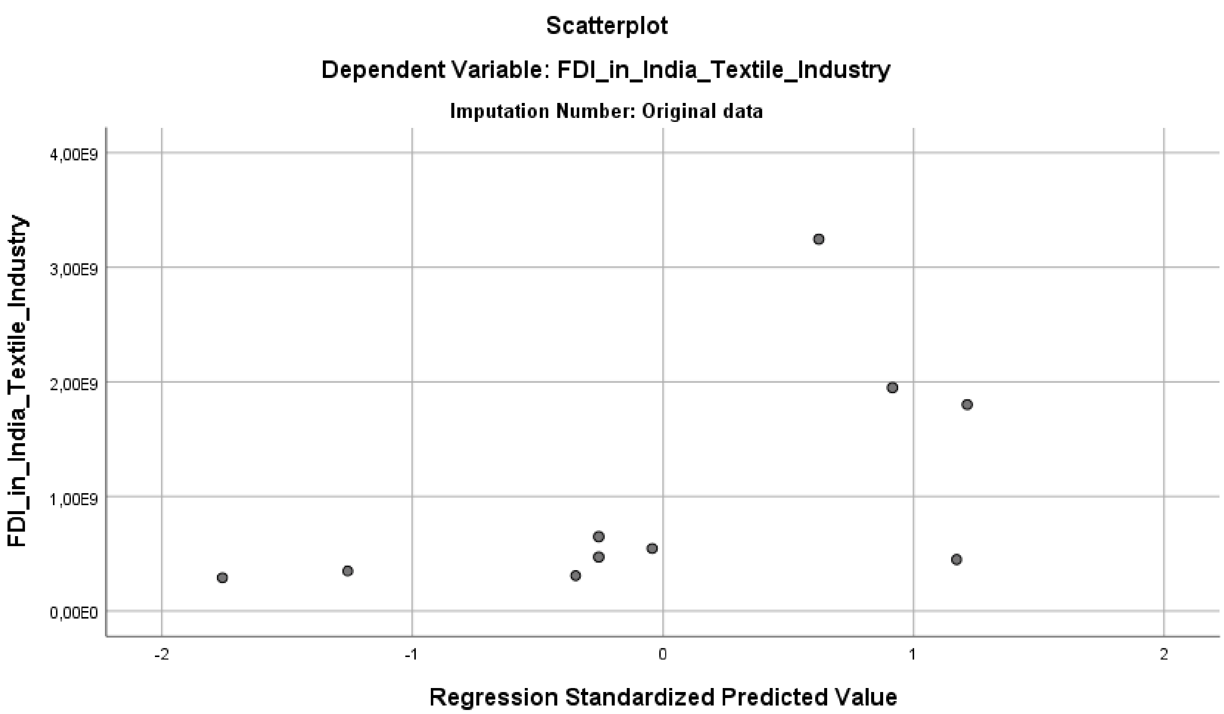

Figure 40: Scatterplot: Governance factors: Voice and accountability

			Unstandardized Coefficients		Standardized Coefficients		Correlation		Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF
Original data	1	(Constant)	22336734187,243	10734870857,515		,071				
		Voice_and_Accountability	-348991808,553	175582084,915	-,575	,082	-,575	-,575	1,000	1,000
1	1	(Constant)	14615916083,848	7490534534,147		,068				
		Voice_and_Accountability	-228811072,776	122460570,975	-,413	,079	-,413	-,413	1,000	1,000
2	1	(Constant)	18095292544,650	8641941792,621		,052				
		Voice_and_Accountability	-285848725,894	141363740,136	-,440	,059	-,440	-,440	1,000	1,000
3	1	(Constant)	13214559921,639	7704495490,364		,104				
		Voice_and_Accountability	-205570562,329	125761074,364	-,369	,121	-,369	-,369	1,000	1,000
4	1	(Constant)	20785981564,627	7695715619,013		,015				
		Voice_and_Accountability	-328984366,654	125543927,533	-,536	,018	-,536	-,536	1,000	1,000
5	1	(Constant)	16300190524,325	8062819294,823		,059				
		Voice_and_Accountability	-256370664,687	131830509,827	-,427	,069	-,427	-,427	1,000	1,000
6	1	(Constant)	11103756793,048	7606574116,605		,163				
		Voice_and_Accountability	-172075587,652	124863770,919	-,317	,186	-,317	-,317	1,000	1,000
7	1	(Constant)	14748849152,788	7975840172,190		,082				
		Voice_and_Accountability	-230910532,001	130356431,861	-,395	,094	-,395	-,395	1,000	1,000
8	1	(Constant)	13045418011,232	7437221036,194		,097				
		Voice_and_Accountability	-203098995,313	121569743,738	-,376	,113	-,376	-,376	1,000	1,000
9	1	(Constant)	10482601265,654	7807037187,094		,197				
		Voice_and_Accountability	-161730314,661	128040298,057	-,293	,224	-,293	-,293	1,000	1,000
10	1	(Constant)	9305905638,008	8896145461,318		,310				
		Voice_and_Accountability	-143019671,166	146518709,287	-,230	,343	-,230	-,230	1,000	1,000
Pooled	1	(Constant)	14169847149,982	8771988931,363		,107				
		Voice_and_Accountability	-221642049,313	143389706,991		,123	-,383	-,383		

Table 27: Coefficients: Governance factors: Voice and accountability

IV: Government Effectiveness:

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,064[a]	,004	-,120	1052597680,35824	,366
1	1	,045[a]	,002	-,057	849322622,57542	,273
2	1	,025[a]	,001	-,058	849919901,12648	,268
3	1	,081[a]	,007	-,052	847425257,78980	,287
4	1	,078[a]	,006	-,052	847598257,00183	,288
5	1	,021[a]	,000	-,058	849999945,30307	,267
6	1	,069[a]	,005	-,054	848192281,09805	,281
7	1	,158[a]	,025	-,032	839497887,67143	,329
8	1	,078[a]	,006	-,052	847605872,80741	,284
9	1	,038[a]	,001	-,057	849591585,30347	,272
10	1	,040[a]	,002	-,057	849527992,90150	,271

a. Predictors: (Constant), Government_Effectiveness

b. Dependent Variable: FDI_in_India_Textile_Industry

Table 28: Summary: Governance factors: Government effectiveness

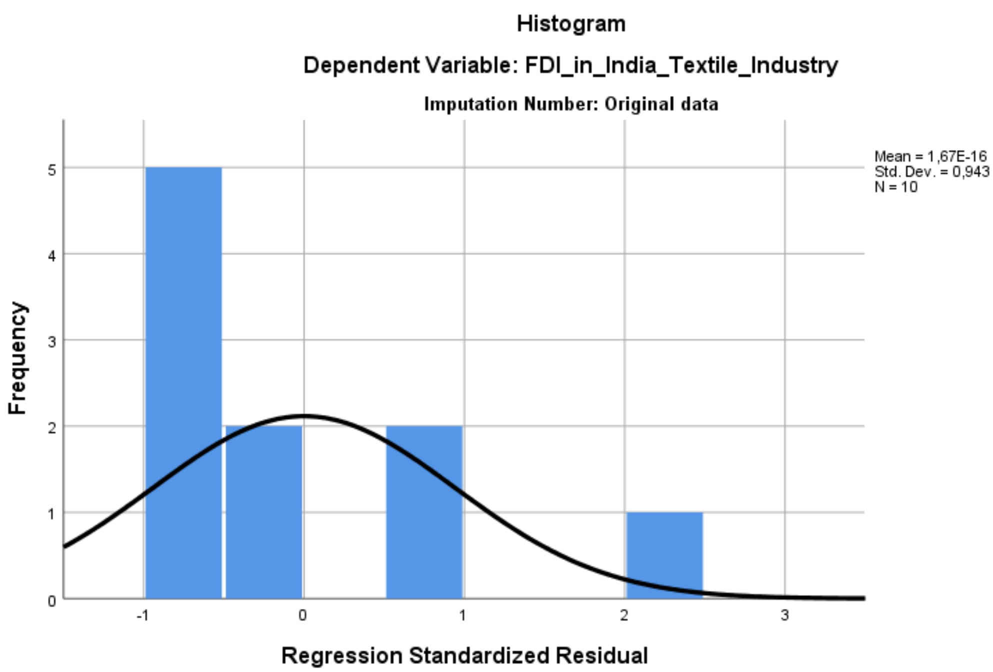

Figure 41: Histogram: Governance factors: Government effectiveness

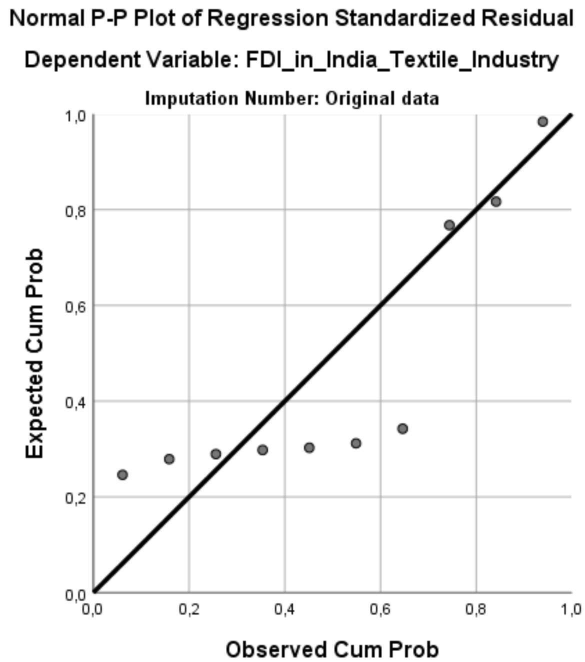

Figure 42: Normal P-P Plot: Governance factors: Government effectiveness

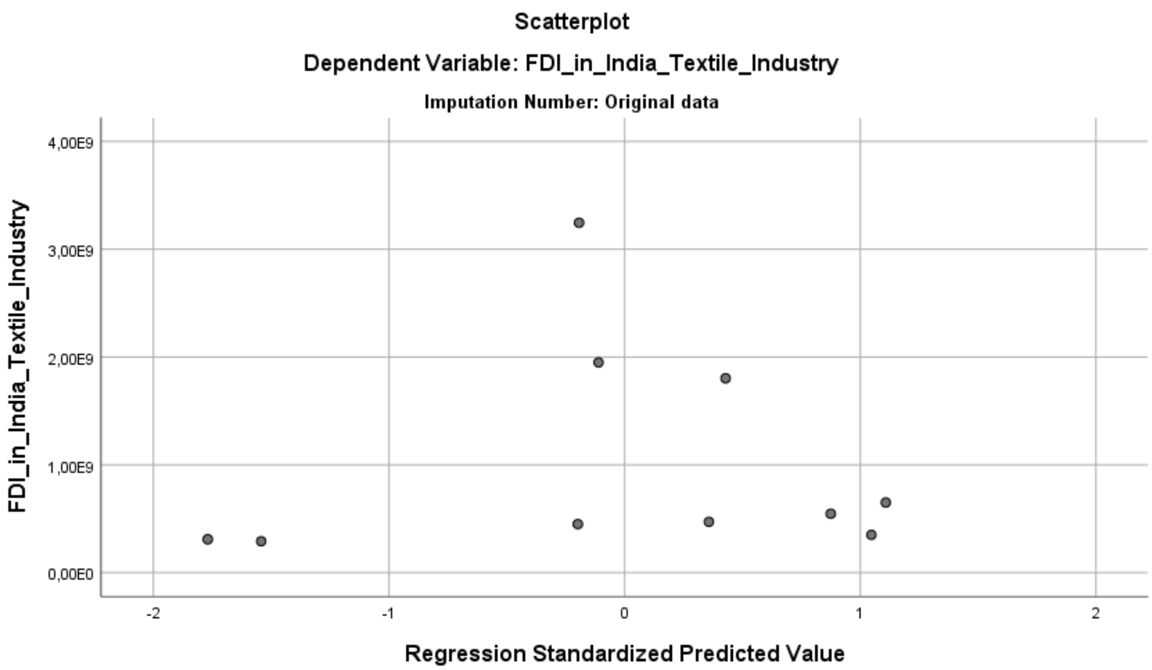

Figure 43: Scatterplot: Governance factors: Government effectivness

			Unstandardized Coefficients		Standardized Coefficients		Correlation		Collinearity Statistics		Relative Increase Variance	F
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF		
Original data	1	(Constant)	1491518730,803	2688269352,461		,594						
		Government_Effectiveness	-10779892,616	59313879,392	-,064	,860	-,064	-,064	1,000	1,000		
1	1	(Constant)	1002153690,428	2033776518,690		,628						
		Government_Effectiveness	-8418459,846	45089990,514	-,045	,854	-,045	-,045	1,000	1,000		
2	1	(Constant)	833668625,892	2013704769,080		,684						
		Government_Effectiveness	-4699885,769	44966790,541	-,025	,918	-,025	-,025	1,000	1,000		
3	1	(Constant)	1302388961,407	2042836668,410		,532						
		Government_Effectiveness	-15006140,017	44995390,966	-,081	,743	-,081	-,081	1,000	1,000		
4	1	(Constant)	1230923245,156	1889269841,777		,523						
		Government_Effectiveness	-13343172,773	41327643,285	-,078	,751	-,078	-,078	1,000	1,000		
5	1	(Constant)	805476532,335	2072427059,001		,702						
		Government_Effectiveness	-4044181,211	46026327,599	-,021	,931	-,021	-,021	1,000	1,000		
6	1	(Constant)	1213072380,828	2087332321,997		,569						
		Government_Effectiveness	-13067206,300	46115643,412	-,069	,780	-,069	-,069	1,000	1,000		
7	1	(Constant)	1994565503,568	2084501723,542		,352						
		Government_Effectiveness	-29938082,184	45344445,844	-,158	,518	-,158	-,158	1,000	1,000		
8	1	(Constant)	1307206674,084	2127538817,662		,547						
		Government_Effectiveness	-15138280,175	46956886,939	-,078	,751	-,078	-,078	1,000	1,000		
9	1	(Constant)	934305625,517	2008201706,811		,648						
		Government_Effectiveness	-6902633,181	44487626,016	-,038	,879	-,038	-,038	1,000	1,000		
10	1	(Constant)	950002994,514	2006331811,922		,642						
		Government_Effectiveness	-7283709,119	44640017,636	-,040	,872	-,040	-,040	1,000	1,000		
Pooled	1	(Constant)	1157376423,373	2070215642,895		,576						
		Government_Effectiveness	-11784175,057	45718933,924		,797	-,063	-,063				

Table 29: Coefficients: Governance factors: Government effectiveness

IV: Rule of Law

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,264[a]	,070	-,047	1017413627,22658	,502
1	1	,226[a]	,051	-,005	828291668,00520	,413
2	1	,134[a]	,018	-,040	842572129,82152	,322
3	1	,243[a]	,059	,004	824716004,03876	,409
4	1	,164[a]	,027	-,030	838739361,48065	,317
5	1	,176[a]	,031	-,026	836968604,67360	,362
6	1	,184[a]	,034	-,023	835651120,78936	,342
7	1	,173[a]	,030	-,027	837387690,80755	,365
8	1	,324[a]	,105	,053	804224406,35008	,548
9	1	,257[a]	,066	,011	821742946,05683	,408
10	1	,319[a]	,102	,049	805659317,87360	,544

a. Predictors: (Constant), Rule_of_Law

b. Dependent Variable: FDI_in_India_Textile_Industry

Table 30: Summary: Governance factors: Rule of law

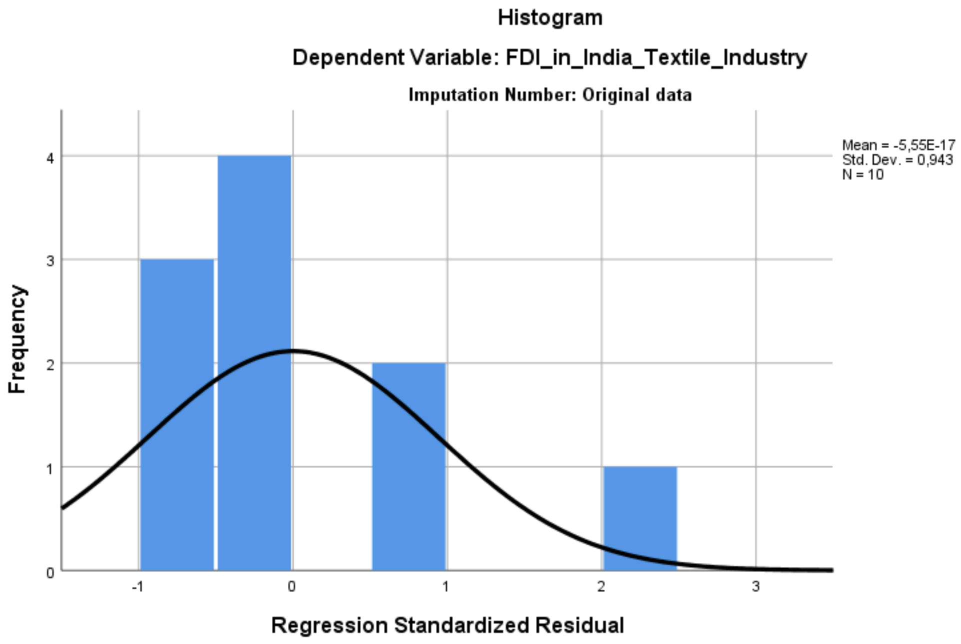

Figure 44: Histogram: Governance factors: Rule of law

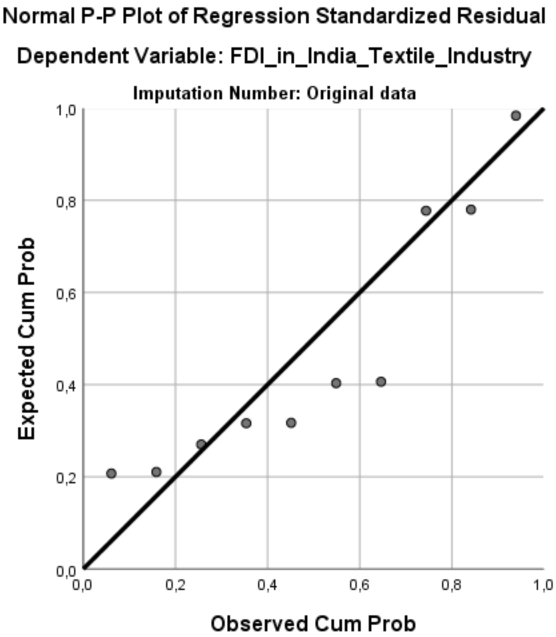

Figure 45: Normal P-P Plot: Governance factors: Rule of law

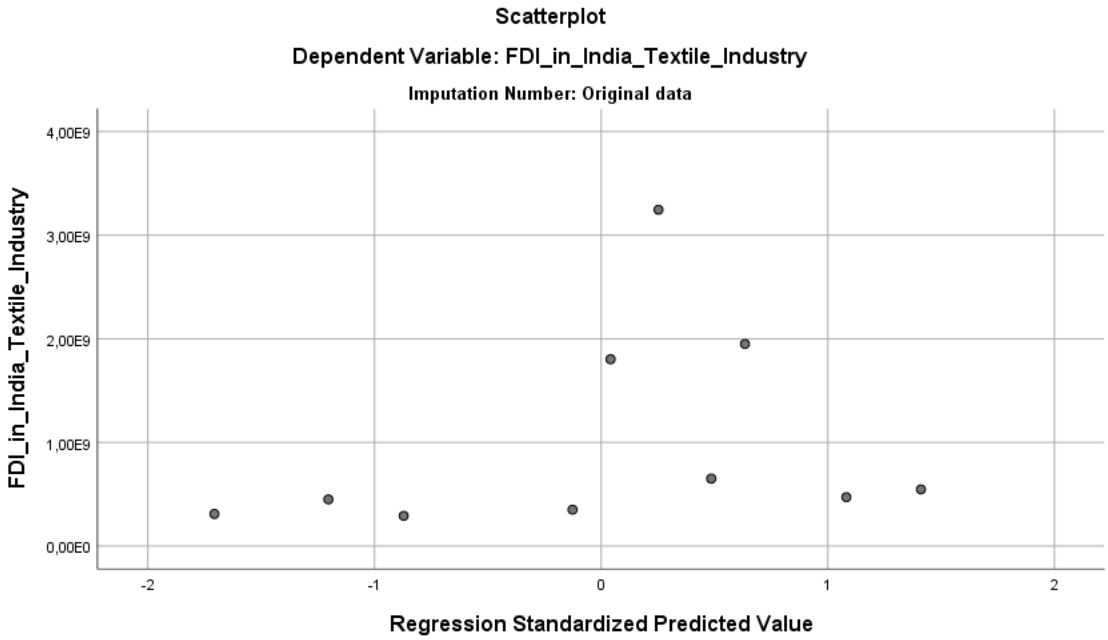

Figure 46: Scatterplot: Governance factors: Rule of law

			Unstandardized Coefficients		Standardized Coefficients		Correlation		Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF
Original data	1	(Constant)	5771458162,614	6168752423,548		,377				
		Rule_of_Law	-81443223,067	105298041,125	-,264	,461	-,264	-,264	1,000	1,000
1	1	(Constant)	4890600078,051	4474251849,394		,290				
		Rule_of_Law	-73093245,161	76584829,950	-,226	,353	-,226	-,226	1,000	1,000
2	1	(Constant)	3029832716,881	4332595056,221		,494				
		Rule_of_Law	-41304837,183	74316407,084	-,134	,586	-,134	-,134	1,000	1,000
3	1	(Constant)	5441460284,619	4668410387,820		,260				
		Rule_of_Law	-82151325,397	79547284,951	-,243	,316	-,243	-,243	1,000	1,000
4	1	(Constant)	3505039576,558	4217929304,042		,418				
		Rule_of_Law	-49167556,831	71912522,804	-,164	,503	-,164	-,164	1,000	1,000
5	1	(Constant)	3966449052,526	4546191089,234		,395				
		Rule_of_Law	-57221154,971	77763555,824	-,176	,472	-,176	-,176	1,000	1,000
6	1	(Constant)	4162563523,288	4584232525,268		,377				
		Rule_of_Law	-60501505,840	78315674,695	-,184	,450	-,184	-,184	1,000	1,000
7	1	(Constant)	4080058824,539	4778424746,828		,405				
		Rule_of_Law	-59250975,319	81859931,875	-,173	,479	-,173	-,173	1,000	1,000
8	1	(Constant)	7004944171,768	4516840595,668		,139				
		Rule_of_Law	-108135601,843	76483656,151	-,324	,175	-,324	-,324	1,000	1,000
9	1	(Constant)	5784069050,460	4718970323,403		,237				
		Rule_of_Law	-87875098,286	80302019,996	-,257	,289	-,257	-,257	1,000	1,000
10	1	(Constant)	6712470451,319	4384834575,304		,144				
		Rule_of_Law	-103548974,082	74510587,123	-,319	,183	-,319	-,319	1,000	1,000
Pooled	1	(Constant)	4857748773,001	4740421694,307		,306				
		Rule_of_Law	-72225027,491	80797362,715		,372	-,221	-,221		

Table 31: Coefficients: Governance factors: Rule of law

IV: Control of Corruption

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,112[a]	,013	-,111	1048082183,72099	,347
1	1	,064[a]	,004	-,055	848474674,25481	,253
2	1	,048[a]	,002	-,056	849208863,98923	,254
3	1	,011[a]	,000	-,059	850137196,62825	,260
4	1	,028[a]	,001	-,058	849852795,76370	,256
5	1	,141[a]	,020	-,038	841725563,21491	,271
6	1	,184[a]	,034	-,023	835747173,51390	,275
7	1	,058[a]	,003	-,055	848768697,47820	,252
8	1	,135[a]	,018	-,040	842444349,25662	,265
9	1	,076[a]	,006	-,053	847710571,94920	,256
10	1	,131[a]	,017	-,041	842897047,24342	,257

a. Predictors: (Constant), Control_of_Corruption

b. Dependent Variable: FDI_in_India_Textile_Industry

Table 32: Summary: Governance factors: Control of corruption

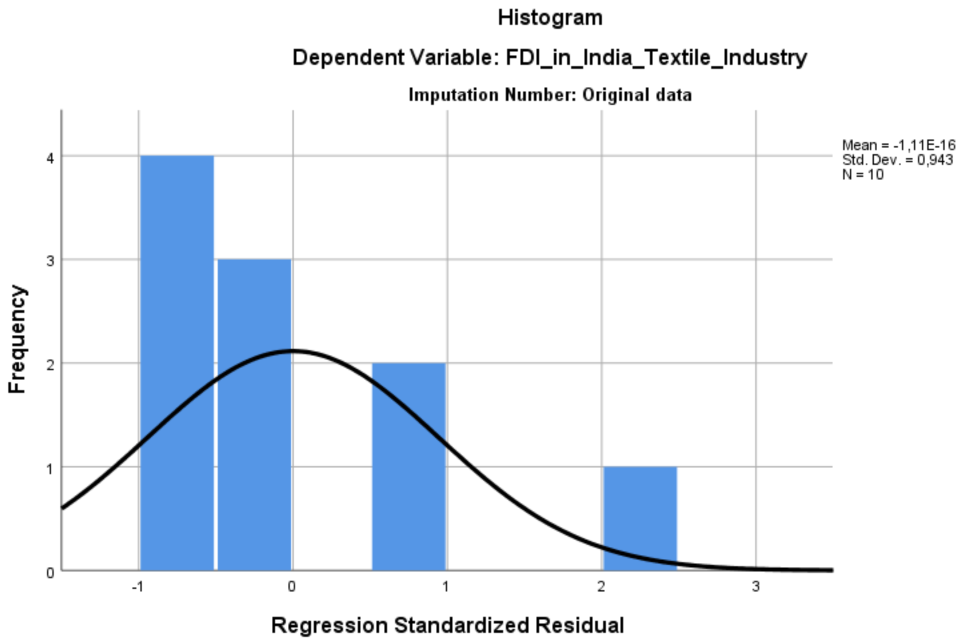

Figure 47: Histogram: Governance factors: Control of corruption

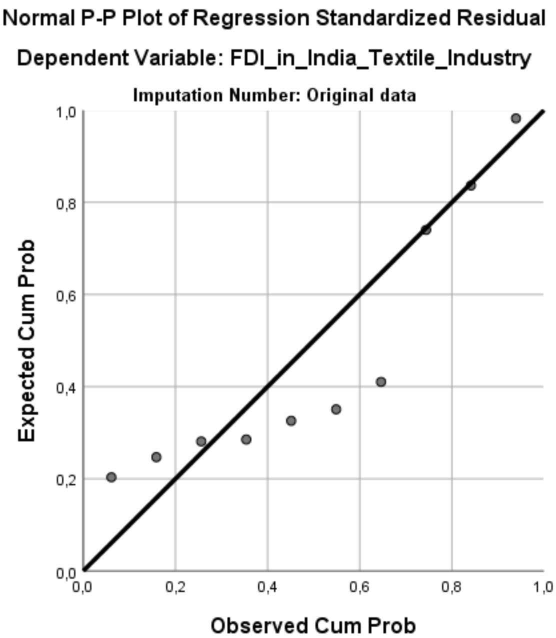

Figure 48: Normal P-P Plot: Governance factors: Control of corruption

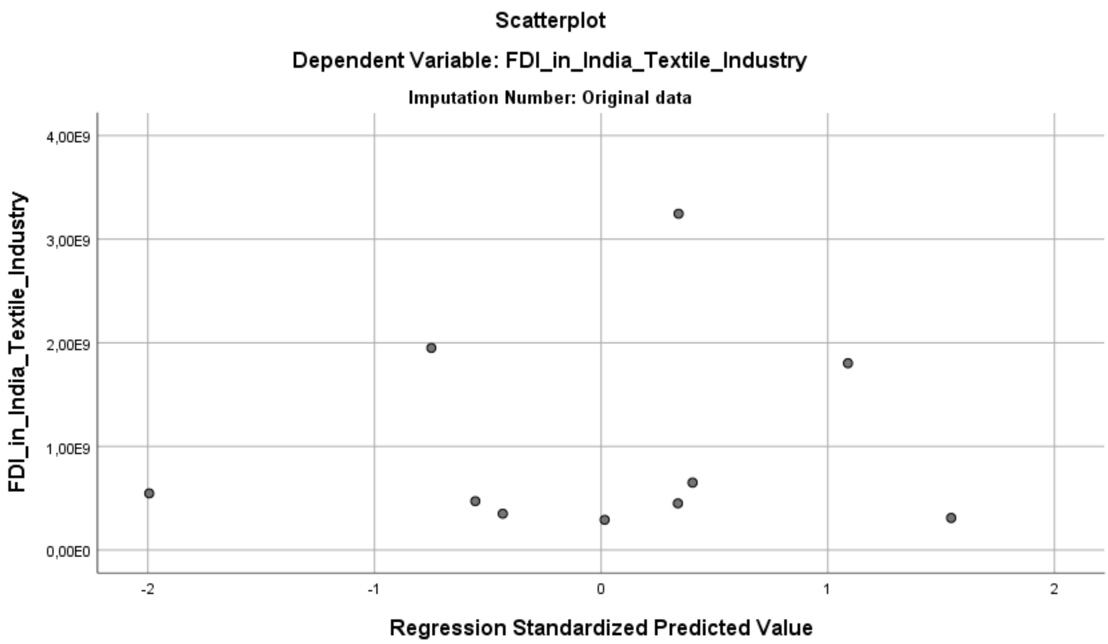

Figure 49:Scatterplot: Governance factors: Control of corruption

Coefficients[a]

Imputation Number	Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.	95,0% Confidence Interval for B Lower Bound	95,0% Confidence Interval for B Upper Bound
Original data	1	(Constant)	-342989737,551	4230839973,161		-,081	,937	-10099324211,027	9413344735,92
		Control_of_Corruption	31421105,293	98192020,027	,112	,320	,757	-195010098,932	257852309,51
1	1	(Constant)	-152486353,440	2964776368,887		-,051	,960	-6407617721,310	6102645014,42
		Control_of_Corruption	18031369,154	68682184,974	,064	,263	,796	-126875374,625	162938112,93
2	1	(Constant)	-1659790,627	3158089098,251		-,001	1,000	-6664645366,303	6661325785,04
		Control_of_Corruption	14532318,851	73191933,080	,048	,199	,845	-139889161,732	168953799,43
3	1	(Constant)	478132293,002	3099483899,444		,154	,879	-6061207121,288	7017471707,29
		Control_of_Corruption	3378252,377	71549073,923	,011	,047	,963	-147577098,365	154333603,11
4	1	(Constant)	254164283,040	3177654567,854		,080	,937	-6450100825,192	6958429391,27
		Control_of_Corruption	8567930,776	73440406,872	,028	,117	,908	-146377783,685	163513645,23
5	1	(Constant)	-1067696613,943	2892162511,885		-,369	,717	-7169626135,144	5034232907,25
		Control_of_Corruption	39516905,168	67400774,708	,141	,586	,565	-102686299,268	181720109,60
6	1	(Constant)	-1516520362,044	2787061663,104		-,544	,593	-7396706475,243	4363665751,15
		Control_of_Corruption	50362020,864	65412730,574	,184	,770	,452	-87646777,090	188370818,81
7	1	(Constant)	-149533978,856	3243768857,714		-,046	,964	-6993288045,751	6694220088,03
		Control_of_Corruption	17944537,985	75095485,655	,058	,239	,814	-140493087,475	176382163,44
8	1	(Constant)	-985524844,551	2878411626,443		-,342	,736	-7058442533,437	5087392844,33
		Control_of_Corruption	37486620,617	66880546,732	,135	,561	,582	-103618998,731	178592239,96
9	1	(Constant)	-349995801,836	3091259528,757		-,113	,911	-6871983310,733	6171991707,06
		Control_of_Corruption	22677519,100	71817342,205	,076	,316	,756	-128843828,244	174198866,44
10	1	(Constant)	-1075573841,849	3132476758,806		-,343	,736	-7684522104,777	5533374421,08
		Control_of_Corruption	39647639,685	72926983,417	,131	,544	,594	-114214845,972	193510125,34
Pooled	1	(Constant)	-456669501,111	3124032543,801		-,146	,884	-6581670056,109	5668331053,88
		Control_of_Corruption	25214511,458	72563944,977		,347	,728	-117056965,208	167485988,12

a. Dependent Variable: FDI_in_India_Textile_Industry

Table 33: Coefficients: Governance factors: Control of corruption

IV: Regulatory Quality

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,331[a]	,110	-,002	995223492,57204	,481
1	1	,294[a]	,086	,032	812742403,76775	,450
2	1	,265[a]	,070	,016	819808532,83274	,412
3	1	,226[a]	,051	-,005	828205229,80005	,393
4	1	,377[a]	,142	,092	787410628,68397	,560
5	1	,189[a]	,036	-,021	834884046,15109	,334
6	1	,243[a]	,059	,004	824776109,38014	,424
7	1	,265[a]	,070	,015	819900261,70050	,439
8	1	,210[a]	,044	-,012	831278763,17007	,389
9	1	,188[a]	,035	-,021	834985023,13976	,370
10	1	,251[a]	,063	,008	822939057,77087	,386

a. Predictors: (Constant), Regulatory_Quality

b. Dependent Variable: FDI_in_India_Textile_Industry

Table 34: Summary: Governance factors: Regulatory quality

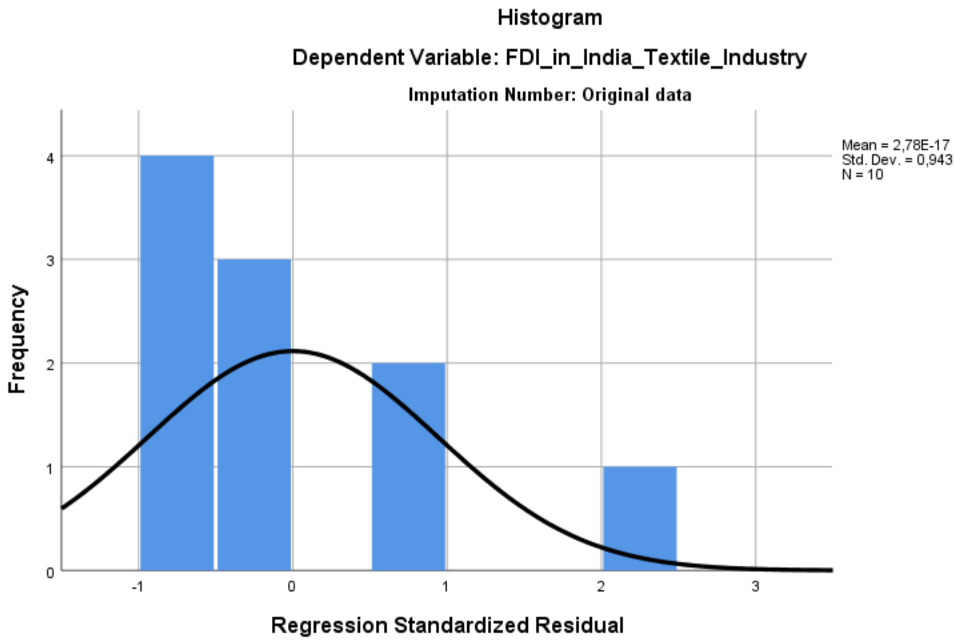

Figure 50: Histogram: Governance factors: Regulatory quality

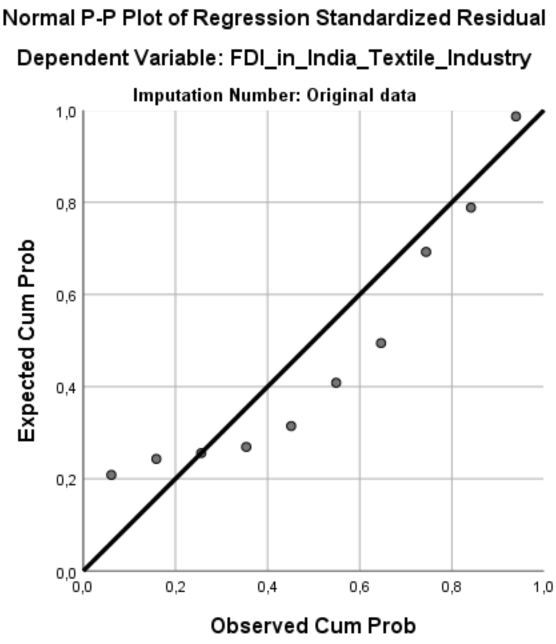

Figure 51: Normal P-P Plot: Governance factors: Regulatory quality

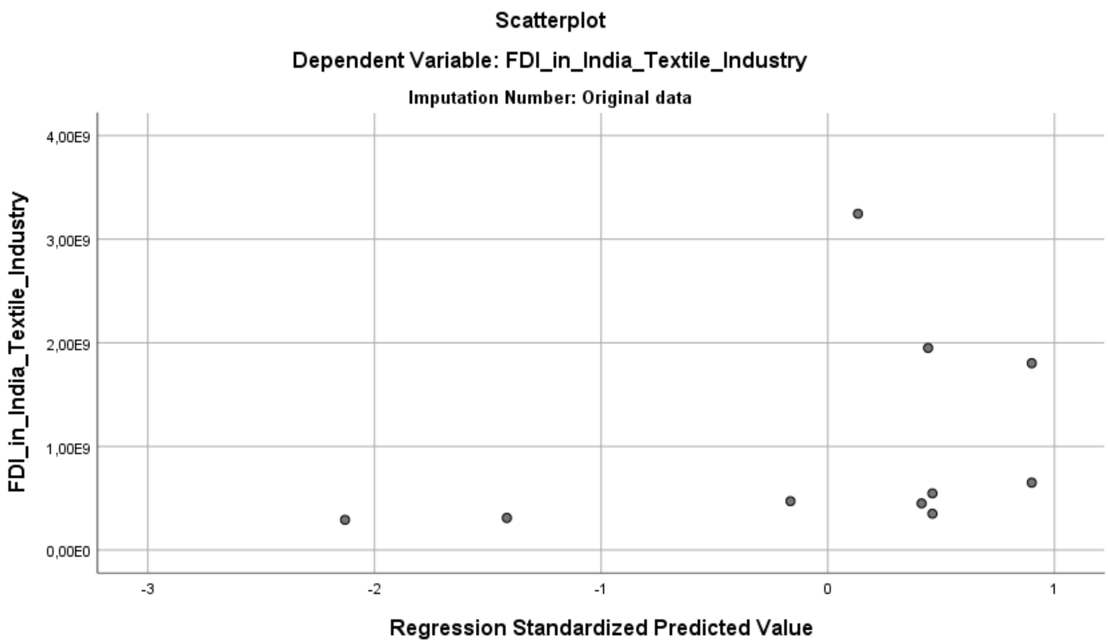

Figure 52: Scatterplot: Governance factors: Regulatory quality

Coefficients[a]

Imputation Number	Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B	
			B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound
Original data	1	(Constant)	-1064783415,892	2109821355,948		-,505	,627	-5930040187,240	3800473355,456
		Regulatory_Quality	52502528,354	52875845,227	,331	,993	,350	-69429389,392	174434446,099
1	1	(Constant)	-1485789561,623	1677028433,807		-,886	,388	-5024010275,738	2052431152,491
		Regulatory_Quality	53658926,167	42384176,513	,294	1,266	,223	-35763869,694	143081722,027
2	1	(Constant)	-1160101808,255	1586149456,052		-,731	,474	-4506584639,406	2186381022,895
		Regulatory_Quality	45574799,500	40228047,054	,265	1,133	,273	-39298960,840	130448559,840
3	1	(Constant)	-812028696,020	1513715497,905		-,536	,599	-4005689233,909	2381631841,868
		Regulatory_Quality	36205526,368	37857410,138	,226	,956	,352	-43666627,278	116077680,014
4	1	(Constant)	-1963493381,330	1551769739,938		-1,265	,223	-5237441351,862	1310454589,202
		Regulatory_Quality	66767146,334	39766429,457	,377	1,679	,111	-17132686,009	150666978,677
5	1	(Constant)	-668319172,293	1640711707,463		-,407	,689	-4129918291,432	2793279946,847
		Regulatory_Quality	32256408,769	40666423,122	,189	,793	,439	-53542244,229	118055061,768
6	1	(Constant)	-927995105,980	1516689024,268		-,612	,549	-4127929236,110	2271939024,150
		Regulatory_Quality	39308037,434	38109118,734	,243	1,031	,317	-41095174,930	119711249,797
7	1	(Constant)	-1232746515,069	1652440473,300		-,746	,466	-4719091167,080	2253598136,942
		Regulatory_Quality	47112404,985	41651693,923	,265	1,131	,274	-40764987,698	134989797,668
8	1	(Constant)	-801673667,367	1623226407,843		-,494	,628	-4226382028,983	2623034694,250
		Regulatory_Quality	35751023,085	40417758,723	,210	,885	,389	-49522993,891	121025040,061
9	1	(Constant)	-557853453,414	1507522032,845		-,370	,716	-3738446922,238	2622740015,410
		Regulatory_Quality	29559800,387	37393663,094	,188	,791	,440	-49333932,522	108453533,295
10	1	(Constant)	-1077465182,956	1601669971,874		-,673	,510	-4456693440,165	2301763074,252
		Regulatory_Quality	42852411,457	40053383,850	,251	1,070	,300	-41652841,735	127357664,650
Pooled	1	(Constant)	-1068746654,431	1648163795,468		-,648	,517	-4301308221,269	2163814912,407
		Regulatory_Quality	42904648,449	41549327,008		1,033	,302	-38598272,115	124407569,012

a. Dependent Variable: FDI_in_India_Textile_Industry

Table 35: Coefficients: Governance factors: Regulatory quality

8.2.6 Model 6: Infrastructure

DV: FDI

IV: Individuals using the internet

Model Summary[b]

Imputation Number	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
Original data	1	,895[a]	,801	,789	379461080,99921	1,068
1	1	,895[a]	,801	,789	379461080,99921	1,068
2	1	,895[a]	,801	,789	379461080,99921	1,068
3	1	,895[a]	,801	,789	379461080,99921	1,068
4	1	,895[a]	,801	,789	379461080,99921	1,068
5	1	,895[a]	,801	,789	379461080,99921	1,068
6	1	,895[a]	,801	,789	379461080,99921	1,068
7	1	,895[a]	,801	,789	379461080,99921	1,068
8	1	,895[a]	,801	,789	379461080,99921	1,068
9	1	,895[a]	,801	,789	379461080,99921	1,068
10	1	,895[a]	,801	,789	379461080,99921	1,068

a. Predictors: (Constant), Individuals_Internet

b. Dependent Variable: FDI_in_India_Textile_Industry

Table 36: Summary: Infrastructure: Individuals using the internet

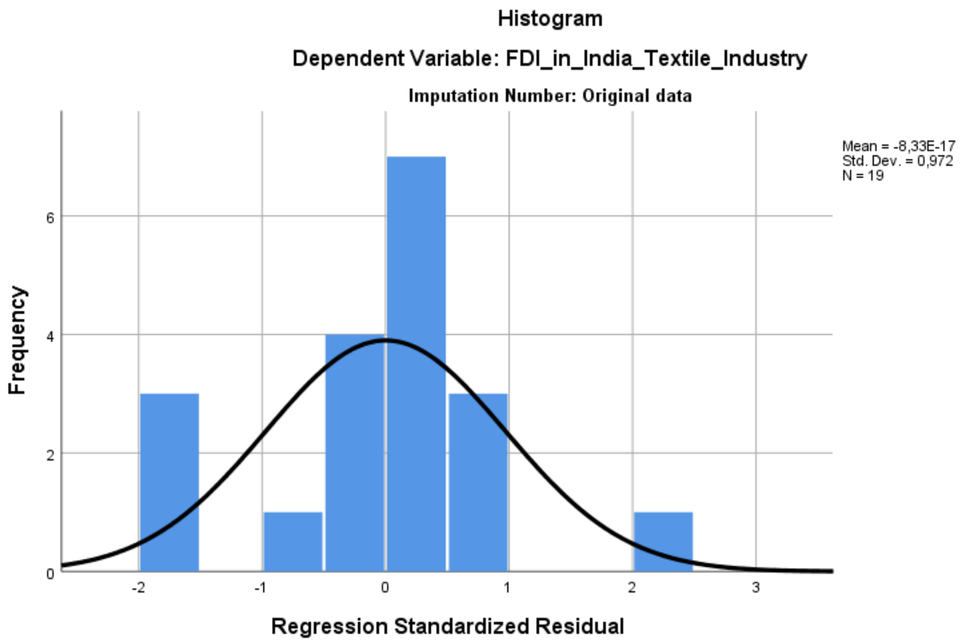

Figure 53: Histogram: Infrastructure: Individuals using the internet

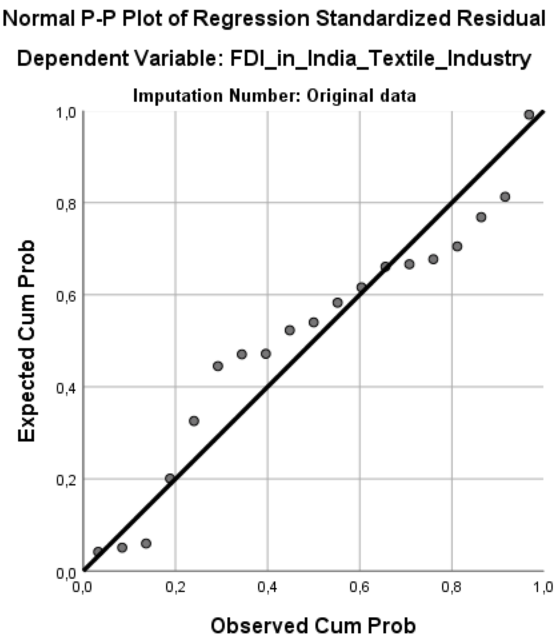

Figure 54: Normal P-P Plot: Infrastructure: Individuals using the internet

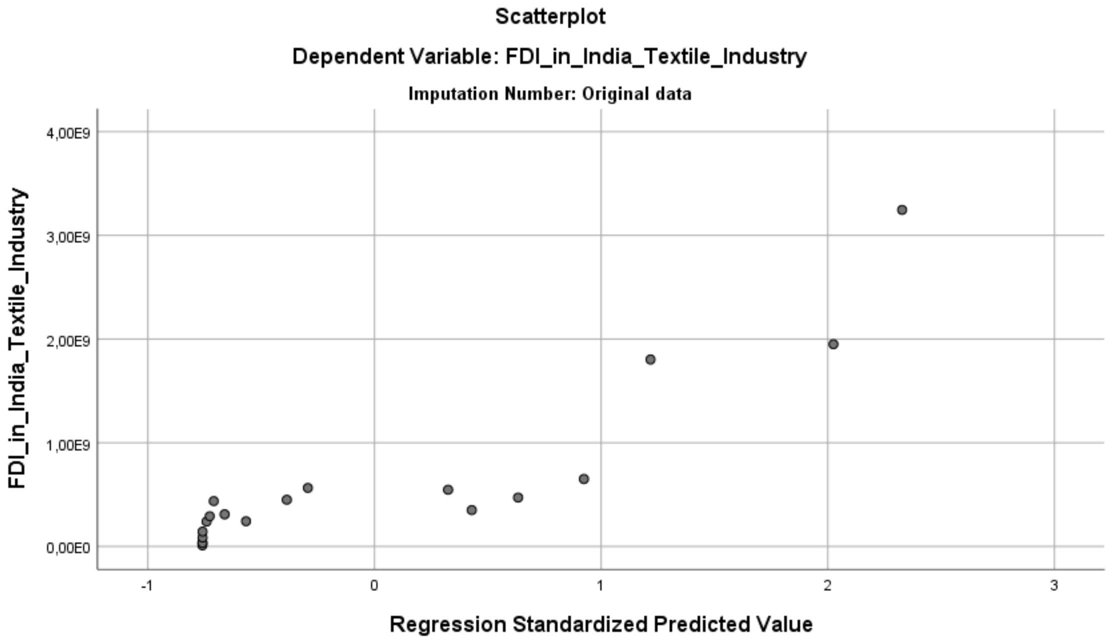

Figure 55: Scatterplot: Infrastructure: Individuals using the internet

			Unstandardized Coefficients		Standardized Coefficients		Correlation		Collinearity Statistics	
Imputation Number	Model		B	Std. Error	Beta	Sig.	Partial	Part	Tolerance	VIF
Original data	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
1	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
2	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
3	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
4	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
5	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
6	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
7	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
8	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
9	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
10	1	(Constant)	62816071,595	110407513,374		,577				
		Individuals_Internet	521108565,888	63036592,576	,895	,000	,895	,895	1,000	1,000
Pooled	1	(Constant)	62816071,595	110407513,374		,569				
		Individuals_Internet	521108565,888	63036592,576		,000	,895	,895		

Table 37: Coefficients: Infrastructure: Individuals using the internet