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Impact of Corruption on Foreign Direct Investment, Tax Revenues and Trade in Afghanistan: An Empirical Examination and Literature Review

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**Impact of Corruption on Foreign Direct Investment, Tax Revenues and Trade in
Afghanistan: An Empirical Examination and Literature Review**

Somaya Karokhi and Mohammad Mirwais Rasa

July, 2020

Abstract

Using Transparency International's Corruption Perceptions Index (CPI), this study establishes a statistically significant link between CPI and foreign direct investment (FDI) in Afghanistan. In addition to each country's CPI, several location and economic characteristics are also postulated to influence FDI. For 2003- 2019 in Afghanistan, the paper then simulates the impact of an improvement in the CPI score on FDI. This simulation shows that a one-point improvement in CPI would generate on average additional FDI of 0.5% of GDP. The paper further simulates the effects of larger FDI on the generation of taxable income and tax revenues in Afghanistan using year's specific rates of return on Afghanistan investment and the highest marginal corporate tax rate in Afghanistan. This simulation shows that a three-point improvement in CPI would more than double the corporate tax take on average with the biggest beneficiaries.

Introduction

An Afghanistan peace deal, currently under discussion between the Taliban and the U.S., will depend in the long term on more than political and military agreements. A sustained peace will also require that the Afghan government can generate growing revenue to help pay its soldiers, deliver services and reduce its dependence on foreign aid. As with any country, Afghanistan's government revenue is an important fiscal indicator and determinant of macroeconomic stability; in Afghanistan, it will also be critical to stabilizing the country should a peace agreement materialize.

The Money and Exchange Market in Kabul, Afghanistan, March 17, 2012. (Bryan Denton/The New York Times). Afghanistan's revenue picture today is decidedly mixed. On the bright side, total revenues have grown significantly since the fiscal crisis of 2014, an expansion—and improved cash position—that has extended into 2019 (Wani, 2019). There is no question that the government is better situated now than it was immediately before the crisis five years ago. On the other hand, most of the apparent improvement—at least in 2019—can be attributed to the weakening of the Afghan currency against the U.S. dollar, a development that offers no sustainable path to long-term revenue growth. For those concerned about the prospects for a lasting peace, a closer look at the numbers is warranted. Since the fiscal crisis around the 2014 presidential election, Afghanistan's total revenue has recovered strongly and has grown rapidly—by about 22 percent in 2015, 20 percent in 2016, 15 percent in 2017, and 12 percent in 2018.

In 2018, total revenue was almost 90 percent higher than in 2014 in nominal Afghan currency (Afghanis), and rose to 13.4 percent of gross domestic product last year from its nadir of 8.5 percent

in 2014. This constitutes a rare bright spot in Afghanistan's otherwise bleak fiscal and economic landscape. Even so, government revenue did not surpass its 2011-12 peak of 11.7 percent of GDP until 2017. In short, a half-decade of progress on the revenue front was lost because of the economic shock triggered by the drawdown of U.S. and international troops from 2011 to 2014,

The lingering effect of the 2014 fiscal crisis, and the political uncertainty that has plagued Afghanistan's current National Unity Government during much of its tenure. Transparency International (TI) has ranked various countries in terms of corruption since 1995. TI's attempt to quantify corruption perception index (CPI) has recently reviewed a significant amount of research that examines the various features and implications of this evolving phenomenon. As well as developed countries around the world. Our comparative analysis of CPIs from 1995 to 1998 shows that the relative ranking of countries in terms of perceived corruption does not change from year to year. In general, developing countries are considered more corrupt than developed countries.

In addition to studying the CPIs themselves, we use CPI rankings for 2003-2019 to determine the impact perception of corruption has on the flow of foreign direct investment (FDI) in Afghanistan. The model used in this paper to explain determinants of FDI includes both location as well as economic variables whereas Wei's important study on this topic in 1997 took into account only location factors.

We then simulate the impact of a three-point improvement in CPI scores on FDI flows to Afghanistan in our sample. Most importantly, using country-specific rates of return on Afghanistan investments abroad as the benchmark rates, we estimate the additional taxable income that Afghanistan would generate by reducing corruption, which in turn, it increases tax revenues that can be added to the government coffers. In fact, we do not stop to find the relationship between CPI and FDI. We go further and find the impact of lower corruption on investment, income and tax collection. It is reminded that the benefit to revenues from a reduction in the generalized level of corruption. Other benefits will accrue from decrease in corruption in the collection of taxes.

Our empirical results show that the more corrupt a country, the less is the inflow of FDI. A lower amount of FDI further handicaps the efforts by developing countries to close the gap between domestic savings and investment. The inflows of FDI not only assist in the easing of balance of payments constraints, but also provide revenues to the government. FDI helps generate taxable income, which like income from domestic investment can be taxed by the host government. By discouraging FDI, corruption ends up impacting revenues available for development.

The paper will review relevant literature; describe the methodology used for our analysis and set out the data sources used in our research; specify and estimate an empirical model; and finally report the simulated impact of a three-point improvement in CPI scores on FDI flows, return on investment and taxable revenue for Afghanistan.

1.1 Background of Study

The great quest of all economists is to find the reasons for the differences in living standards around the world. The search is to discover how this breach can be closed, observing both what makes these countries different and why while some poor countries are developing others seem to be stuck in the same place. There are many different reasons and arguments to try to explain this but we are interested in analyzing the effects of corruption. The World Bank states that it *“has identified corruption as among the greatest obstacles to economic and social development. It undermines development by distorting the rule of law and weakening the institutional foundation on which economic growth depends.* (worldbank.org/public-sector/anticorruption).

In some developed countries like Afghanistan the society is full of corruption, from students that cheat in their exams, to policemen that accept bribes, or politicians who use the law and public resources for their own private business. At a simple glance, in every aspect of society, one can see that there is corruption. This has a negative impact on the living standard, not only by its impact on the economy, but also by creating distrust. This means that ceteris paribus, with the same economic standards, if a country has more corruption than another the living standard will be lower; but we also believe it affects economic performance.

If people in country would suddenly find out that the government was extremely corrupt wasting their taxes, even though it would not change their condition before the news, they would be far worse off by the feeling of being cheated at or that they could be in a better situation than what they really are. But it is hard to measure the moral or psychological effects of corruption, which is why we are going to analyse the economic effects. This is not something new. Adam Smith already had warned us more than 230 years ago:

‘Commerce and manufactures can seldom flourish long in any state which does not enjoy a regular administration of justice; in which the people do not feel themselves secure in the possession of their property; in which the faith of contracts is not supported by law; and in which the authority of the state is not supposed to be regularly employed in enforcing the payment of debts from all those who are able to pay. Commerce and manufactures, in short, can seldom flourish in any state, in which there is not a certain degree of confidence in the justice of government. (Adam Smith 1776).

Corruption can affect the living standard in several ways, from the lack of justice or freedom, to loss of economic resources due to bad administration. Corruption affects the trust of people both in the Government and in each other. It creates incentives not to pay taxes, “why pay taxes to a corrupt government?” Corruption also generates more corruption. It reduces the incentives to work and be productive, because it is easier to earn money in a dishonest way. So, when corruption becomes generalized it can affect every sphere of society.

Saying this we can see that there are several different definitions and levels of corruption. There can be political corruption, when the government uses public resources to gain power, or bureaucratic corruption, where the public servant makes use of public goods for private benefit in an illegal way. Even though they are linked, we shall focus mainly in the later, the impact of bureaucratic corruption. Bureaucratic corruption affects the living standards in many ways, but in this paper, we shall try to measure it seeing how it affects foreign investment.

We shall focus on bureaucratic corruption, which directly affects FDI. There is a vast literature that analyses the effects of FDI on economic growth. Markusen (1995) and Caves (1996), have put together a survey on papers in this subject. Taking this into account we shall assume that FDI is positive for a country. So, by analyzing how corruption affects FDI we shall indirectly see its impact on living standard.

Problem Statement

What are the tax obligations of citizens, residents and investors in Afghanistan? This question is much harder to answer today than it was 18 months ago. Then, the 2009 Income Tax Law, a remarkably well-written and detailed piece of legislation, had gone a long way in establishing a path towards clarity, stability and integrity for taxpayers and officials alike. Indeed, it was one area, where ‘rule of law’ in Afghanistan seemed to be starting to take hold. From late 2015, however, new tax laws were passed and they have created uncertainty and chaos. So, the reason that created more space for corruption is;

- Missing of real tax
- Foreign direct investment is more than tax revenue
- predation and tax evasion
- Reduce of tax revenues
- Lack of awareness of taxpayer about the tax payment norms
- Lack of sufficient system or process to determine real tax

Research Question

The questions of this article seek to address are:

- What is the relationship between corruption and Tax Revenue?
- What is the relationship between corruption and foreign direct investment?
- What are the prevailing corruption trends in Afghanistan?
- What is the impact of these trends on domestic resource mobilization?
- What instruments of revenue collection could help Afghanistan's Customs and Revenue Department generate enough revenue to meet the country's budgetary needs?

Research Objective

Tax collection as source of revenue has been a debatable topic of discussion. It is tried to find out factors which have their impact on tax collection of the government. Specifically, the research will focus on the following:

- To investigate the relationship between corruption and tax revenue
- To investigate the relationship between corruption and foreign direct investment
- To assess situation of the country has any impact on the level of tax collection
- To find out the effects of policies on the level of tax collection
- To analyze impact of corruption on effective tax collection

Significance of Study

This research focuses about the Impact of Corruption on Tax Revenues & foreign direct investment in Afghanistan, and would be useful for government of Afghanistan and employee of ARD due to some reason;

- This study will help to know the main reason of missing of real tax in Afghanistan
- It will help to know What is the reason of predation and tax evasion in Afghanistan
- It will help to analyze and elaborate impact of systems on tax collection, corruption on tax revenues & FDI.

Organization of Study

This study is generally organized into 5 chapters.

Chapter 1 presents an introduction to the study, which covers the background of the study, statement of the problem, aim and objective of the study, the significance of the study as well as definition of some key terms used in the study.

Chapter 2 in on literature reviews of some related research covering studies of the population dynamics, structure and evolution of infectious diseases of corruption, FDI and tax revenue. The focus is to the impact of corruption on FDI & Tax revenue.

Also, chapter 3 highlights the methodology employed by the study, which includes the used annual time series data for the period spanning from 2003-2019 to analyze the Impact of Corruption on Tax Revenues & foreign direct investment in Afghanistan. In this study whilst using Eviews8 as tools to achieve results.

Furthermore, chapter 4 presents the results of the study with table solution to show the effects of the methods in monitoring epidemic diseases.

Finally, chapter 5 discuss the study and makes recommendation based on the study findings while provoking further study in the areas the study could not cover.

2. REVIEW OF LITERATURE

The rise in tax evasion in recent decades has prompted a significant quantity of research into the subject, the impact of Corruption on foreign direct investment & Tax Revenues. To explain the causes, a significant variety of ideas and research has been created in recent years. These ideas identify a variety of factors that may explain the impact of corruption on FDI and tax revenue. In this context, the present chapter examines major theoretical approaches to tax evasion as empirical research to determine which elements are the most resilient in terms of their impact. This chapter is organized as follows; section 2.1 briefly describes the theoretical review. Section 2.2 presents an empirical review. The chapter further identifies the gaps in existing literature and covers the conceptual framework, in section 2.3 and 2.4 respectively.

2.1 Theoretical Review

As recently as 1975, Simon Rotenberg could write that even a “superficial scratching” of the topic of governmental corruption shows it to be a field ripe for “analytical application of microeconomics” which has failed to get the attention it warrants. Perhaps, in keeping with the tenor of research that then prevailed, Herbert Werlin (1973) seems almost apologetic in arguing that despite the seeming usefulness of bribery and other forms of corruption, the diversion of public resources that results must be seen as a “cause for concern in the emerging nations”.

Until recently, a consensus regarding the nature of corruption itself or the response to its presence was lacking. The perceptions of what corruption is varied widely around the world. In fact, one of the

problems with the surveys such as those conducted by Transparency International (TI) is the lack of agreement on the definition of what is corruption. Since the reports and ratings issued by TI are based on perceptions of those seeking to do business around the world, such a lack of uniformity can be a problem. A measure of this diversity in the perceptions of corrupt practices can be seen in the statement of a former CIA director, R. James Woolsey (2000), that a major goal of American spying in Europe is to find out about bribes paid to gain commercial advantages by the continental firms seeking to promote products that are inferior to their American counterparts. In contrast to the United States, bribes paid to gain commercial advantage are accepted much more readily in Europe. There are countries in Europe where bribes paid by business firms to foreign officials are seen as a legitimate tax-deduction, an expense of doing business (Rose-Ackerman, 1999).

In contrast to the 1970s, the attitude of accepting corruption in developing countries as necessary has changed considerably. This change may be seen in John Brademas and Fritz Heimann's paper (1998) titled "Tackling International Corruption: No Longer Taboo." Major efforts are now underway to deal with it, even though higher levels of corruption are not uniformly destructive; corruption is more destructive under some conditions, according to Wedeman (1997).

Similarly, according to Tanzi, "in recent years, and especially in the 1990s, a phenomenon broadly referred to as corruption has attracted a great deal of attention" (Brademas & Heimann, 1998, p. 559). A number of experts have written about global corruption and they include Bardhan (1997), Husted (1999), Ghazanfar and May (2000), Kaufmann & Siegelbaum (1996), Noonan (1984) and Olson (1993). Among organizations, one whose efforts to expose corruption stand out is Transparency International, whose work is well described by Eigen (1996). The World Bank and International Monetary Fund have also shown a great deal of interest in containing global corruption; such interest on the part of these international agencies is evident from a cursory look at the publications and reports cited on their web pages.

In the United States for some time there have been laws on the books, such as the Foreign Corrupt Practices Act, which make paying bribes to officials around the world a crime. The Organization of American States (OAS) enacted the Inter-American Convention against Corruption. Efforts to limit corruption through the development of an international procurement code by the World Trade Organization are underway. The International Chamber of Commerce and the Council of the International Bar Association have come out in support of rules that will prevent bribes. The United Nations Development Program is working to strengthen accounting and auditing in developing

nations (Rose-Ackerman, 1999). Information technology may also help increase transparency globally in the procurement process (Tully, 2000).

The Council of the Organization for Economic Cooperation and Development (OECD) signed an international convention in December 1997 that expects its signatories to outlaw bribes paid to foreign officials for commercial advantage. The Convention's enactment is meant to make Europeans adopt the goals hitherto associated with the American Foreign Corrupt Practices Act and this represents a change in European attitude (Kamm, Rohwedder & Trofimov, 2000).

It is generally accepted now that bribes cannot be tolerated and defended on the basis of the argument that they offset “the inefficiency and arbitrariness of many government rules and regulations” (RoseAckerman, 1999, p. 25). Not all bribes help improve the efficiency of slow governmental bureaucracy; many of the illegal payments are meant to allow tax evasion, environmental pollution, certification of undeserving individuals for publicly paid benefits, and grants of immunity from punishment to criminals. In addition, bribes distort the working of markets, and if based on payoffs, they are bound to be inefficient.

Bribes also set off a spiral effect, if tolerated, and make corruption a way of life. Government officials may be tempted to create rules and regulations meant strictly to help them rather than the state or the public. Such activities undermine the very legitimacy of a government. Clearly, as Rose-Ackerman asserts, “Bribery is not a stable, long-term substitute for law reform” (1999, p. 26). Experts now seem to agree that there is a cost to corruption in terms of economic growth and that there is no simple explanation of the causes, consequences, or scope of corruption. Nor is there a simple strategy that will suffice to put in place possible corrective remedies. As noted by Tanzi (1998), the fight against corruption is likely to be costly and it cannot be waged independently of systemic reforms in the governance of nations subjected to endemic corruption.

2.2- Universality of Corruption

Corruption is nothing new. Before the dawn of the modern era, the Indian philosopher and statesman, Kautilya, saw corruption as showing favors to selfish persons with whom the official has had dealings. He was the Prime Minister in the Maurya Empire in India in the Fourth century B.C. and wrote about effective corruption and governance in his book, *Arthashastra*. He was concerned in particular with corruption on the part of officials in charge of collecting taxes (Ketkar, 2004). In ancient Greece and Rome, we find mention of agronomist, whose job was to keep the market place accountable. In a burning passage in the Book of Ezekiel from the Old Testament, one reads of corruption (*Book of Ezekiel*, 1971, p. 34:2-4). Seven centuries ago, Dante placed bribers in the deepest

parts of Hell, reflecting the medieval distaste for corruption. In his massive book, 839-pages, John Noonan (1984), Jr. has documented the ancient presence of bribes and has ached corruption over 4000 years of history. Ringing condemnation of economic corruption in assorted forms repeatedly occurs in the Qur'an. In keeping with this concern, during the Islamic millennium from 700 to 1700 AD, the period when the Muslim Empires dominated the world, we find the institute of *hisba* that sought to keep corruption in the market place as well as the society in general in check (Murtuza, 2000; 2002).

2.3- Contemporary Perceptions of Corruption

More recently, Gray & Kaufman (1998) defined corruption as the use of the power vested in them by public officials for private gain. Such a use of their power leads to bribery and extortion, which necessarily involves at least two parties. Corruption extends to other types of malfeasance including fraud and embezzlement that a public official can carry out alone or with the help of others. Appropriation of public assets for private use by politicians and high-level officials is associated with "grand" corruption in various countries, some of which are beset with kleptocracies. For Gray and Kaufman, as for others, corruption is really a symptom of fundamental economic, political and institutional ills besetting a nation, where those in power abuse their public offices for private gains.

Corruption is not limited to the have-not nations (Banfield, 1975). Klitgaard (1997) notes, "Much Third World corruption has important First World participation." While there are bribe-takers in the former, there are bribe-givers in the latter. Furthermore, as recent media stories have shown, major banks located in Western countries promote corruption by helping to launder the ill-gotten gains of corrupt leaders in the developing world. Nonetheless, there seems to be increasing agreement that the universality of corruption should not make us ignore it or see it as inevitable (Klitgaard, 1997).

In this case, it may suffer a legal action, be closed, enjoy the International Monetary Fund, the World Bank or other sanctions. International organizations, even in countries with high levels of corruption and then there are the big corruption scandals, where the MNE is to blame and that is the culmination. It costs money for both the managers and the people in charge and for the MNE itself. Also, Company names may be damaged and the company's "intangible price" may decrease, this can be very big because it affects the whole company, not just Investment cost So if the company is analyzing a small investment, this is possible You prefer not to risk your entire reputation.

2.4- Foreign Direct Investments

In recent decades, the global economy has seen an increase in FDI flows: international corporations and multinational enterprises are undertaking cross border investments in order to

control assets and manage production activities on site. FDI has thus become a major source of private external finance for developing countries. Sikkil citing UNCTAD (2000) says that FDI climbed in 1999 for the 9th year in a row to a record setting high of \$865 billion. Total assets of the 690,000 foreign affiliates of some 63,000 transnational corporations (TNCs) are \$18 trillion—sales of \$14 trillion top the value of worldwide exports of \$7 trillion. Sales of foreign affiliates have grown faster than world GDP and world exports of goods and services.

FDI funding is different from other sources of capital, such as aid from developed countries. FDI is motivated largely by the investors' expectation of long-term profits through activities that they control and manage directly. Potentially, FDI not only supplements capital formation in developing countries, but it can also serve as a mechanism of technology transfer to develop skills involving managerial and organizational practices. A number of unanswered questions involving FDI remain, according to Harvard University's Wells, and they concern the extent to which FDI is good for developing countries and the manner in which governmental policies can make the impact of FDI beneficial (Wells, 1998). Though there is some literature that contributes to the understanding of FDI's impact on developing economies, facts regarding long-term economic, political and social impact are scarce according to Wells (1998, p. 103).

Since Wells expressed his concerns, there have been more studies on FDI. The August (2000) issue of *Transnational Corporations* is devoted to papers that seek to understand and analyze FDI. Morriset & Pirnia (2001) have shown that tax incentives neither make up for serious deficiencies in a country's investment environment nor generate the desired externalities. But when other factors—such as infrastructure, transport costs, and political and economic stability—are more or less equal, taxes in one location may have a significant impact on investors' choices. For Altomonte (2000), the design of an efficient, transparent and enforceable legal and institutional framework is a crucial determinant of FDI.

Rose-Ackerman argue that higher levels of corruption may discourage FDI, while Paolo Mauro (1995; 1998) and Ades and di Tella (1997a; 1997b; 1999), using cross-country data, confirm that corruption negatively impacts investment expenditures and GDP growth. Wheeler and Mody (1992) in their discussion of international investment locations touch upon the topic of FDI. One can correctly argue that hitherto there has been very little research that uses empirical analysis to investigate the impact of corruption on FDI. One of the few to do so is Shang-Jin

Wei (2000), who finds that corruption negatively, impacts foreign direct investment. Shang-Jin Wei (2000) argues that corruption acts like a tax on FDI, hence discourages its inflow. Beata Smarzynska

and Shang-Jin Wei (2000) study the impact of corruption in a host country on an international investor's preference for a joint venture versus a wholly owned subsidiary. More advanced technological firms are less likely to engage in joint ventures. They also find American firms to be more averse to joint ventures in corrupt countries than investors from other countries. This paper adds to the evolving research concerning the impact of corruption on FDI to show the consequences that result from a rising perception of corruption.

We shall start by defining FDI. There are several definitions, but taking into account that we will use the statistics by the OECD and most OECD countries use the definition of FDI of the IMF, so we shall use its definition. The IMF defines the direct investment as:

“Direct investment is the category of international investment that reflects the objective of a resident entity in one economy obtaining a lasting interest in an enterprise resident in another economy. The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence by the investor on the management of the enterprise. Direct investment comprises not only the initial transaction establishing the relationship between the investor and the enterprise but also all subsequent transactions between them and among affiliated enterprises, both incorporated and unincorporated.”¹

With foreign direct investment, we differentiate between investing in a portfolio because foreign direct investment is managed. The situation therefore measures the capital that enters the country, which will be for both mediator long period so FDI can be divided into three groups. The first case is when an outsider The company enters a new country and installs itself there (later included Investment) The second case is when a company or a foreign individual buys a percentage of it local company must be at least 10 of them to differentiate from a portfolio investment Company share, because in this way there is a "managerial position". Third it is when a foreigner reinvests in water and electricity services.

2.5- FDI inflows

There are several reasons why a foreigner can invest in a country, but we can divide it in three main categories (Johnson 2005, chapter 2). The first is to gain market share. For example, a company that installs a factory in a foreign country to be able to sell its products there and by being in that country it can increase its sales in the country or region.

The second main reason is to reduce costs, because one or more products are useful Agents there are cheaper. This can include lower salaries, taxes, logistics costs, materials, Land, etc. So, the main goal

¹IMF, “Balance of Payment Manual”. Page 86.

is to produce cheaper than elsewhere and then to Export of products the third reason could be the exploitation of natural resources. This is relevant or mining, gasoline, fishing or any other industry that needs special resources Not Available Elsewhere There is always a combination of the three There may be previous points or several other reasons, for example when the company wants to buy the competition, buy up or down or maybe Just because they see a new industry with great facilities in the local country.

Numerous factors influence investment decisions in a country the industry or indeed any investment may take into account several factors. Nevertheless, there are several macroeconomic and political factors that affect everyone in general Companies that want to invest in a country. These are the things we are going to analyze, Macroeconomic factors affecting foreign direct investment. We will consider first off, all GDP, which measures the total production of a country in one year. As this is equivalent to the size of the market, we consider that the larger the size off the market, the larger the size of FDI. GDP should have a positive relation with FDI. This is fairly direct reasoning; with a higher market there are higher incentives for foreign companies to try to conquer the local market. It is also true for companies who buy other companies, with higher GDP there must be more companies and so more options of companies to buy.

The second variable to consider is per capita GDP. This is a good estimate of Usable income and welfare of each person. With a higher standard of living, Consumption levels need to be more sophisticated, so we expect FDI to increase. So, we also expect it to be positive, higher per capita GDP has a positive effect on it FDI.

A third factor is Inflation. Because of knowledge, travelling costs and inflation, we expect there should be a positive relation between inflation and FDI. Larger inflation should increase the costs, so it should have a positive effect.

There are many other factors that could affect FDI. Taxes, economic openness, democracy, the institutions of the country, interest rates, expected economic growth, natural resources, etc. The structure of the economy and how developed the local industry is should also affect. But we cannot put all variables, first because it would be too difficult to measure and second because if not it would be harder to see the effect of corruption. One good point is that several authors have seen a correlation between some of these variables (mainly the institutional ones) and corruption, so we can say to some extent that corruption includes some of these variables.

2.6- Corruption and FDI

The purpose of this article is to see if corruption affects foreign direct investment. There are several reasons why corruption can affect foreign direct investment (2007). It can increase the cost of FDI first. It does this because in some cases the company has to pay a bribe, so it costs money. In this respect it can be the effect of an extra tax, but according to the law, there is no "official bribe rate", is corruption more than more cost.

Second, it increases uncertainty because it can lead to corruption due to the lack of regulatory change. So even if an MNE pays a bribe, it is not sure it will receive the interest it has paid for can also be corrupted by changing governments change, meaning that it is difficult to see how it develops in the medium or long term. When dealing with corrupt or dishonest bureaucrats, they are more likely to not be honest or try to cheat on the MNE, so this also increases uncertainty.

The third cost of bribery or corruption in any way is the cost of receiving it caught. In this case, it may suffer a legal action, be closed, enjoy IMF, World Bank or other sanctions. International organizations even in countries with high levels of corruption now and then there are the big corruption scandals, where MNE's are to blame and that are a climax. It costs money for both the managers and the people in charge and for the MNE itself. Also, company names may be damaged and the company's "intangible price" may decrease, this can be huge because it affects the whole company, not just investment cost so if a company is analyzing a small investment, it is possible you prefer not to risk your whole reputation.

2.7-Corruption in Revenue Administration

For the purposes of this study, we define (institutional) corruption as illegal or unlawful unauthorized action by a government official who uses his position to receive.

Bribery (either directly or through a family member or co-worker) in exchange for a benefit which is made available to the public (e.g., taxpayers). Opportunities for corruption in demand-driven revenue (by companies and individuals) for corrupt practices and providing (by tax authorities) corrupt practices. Request for corruption is created by the complexity of tax systems, for example, while supply for corrupt people for example, it can be increased if the tax authorities are given too much discretion law.

To analyze the problem of corruption in revenue administration, the main causes or motivations need to be explored. Such an examination could yield valuable suggestions for preventing corruption. Setting ethical considerations aside, corruption would appear determined primarily by the following causes or motivations (Dos Santos, 1995; Tanzi, 1998; Keen, 2003):

Factors Related to Tax System

- A complex tax system can facilitate corruption. Tax auditors may extort bribes from taxpayers by taking advantage of the complex rules of the tax system or through the excessive discretionary power they have because of unclear laws, regulations, and procedures. The taxpayer, who may well be evading his taxes, may choose to bribe the auditor rather than report his conduct to the revenue administration, when the auditor solicits the bribe.
- High tax rates may lead to higher levels of corruption, by increasing the incentive of the taxpayer to evade them; however, there is no clear empirical evidence to either validate or refute this claim.²
- Lack of sanctions is another important factor stimulating corruption. The likelihood of corruption increases if penalties are not sufficiently severe (immediate dismissal and criminal charges) or seldom imposed.
- When it is time-consuming and costly to appeal, the taxpayer might resort to corrupt behavior in order “to get things done.

Factors Related to Tax Administration

- When it becomes complex and cumbersome to pay taxes, the temptation for corruption as a short-cut could arise, both to save time and reduce uncertainty about how much taxes to pay.
- When deciding on whether to engage in corruption, individuals take into account their perceived risk of detection and punishment. If they feel that the systems are deficient (the risk is low), they are more likely to engage in corrupt practices.

If wages of revenue administration personnel are very low, corruption may be seen as an acceptable form of income supplement.

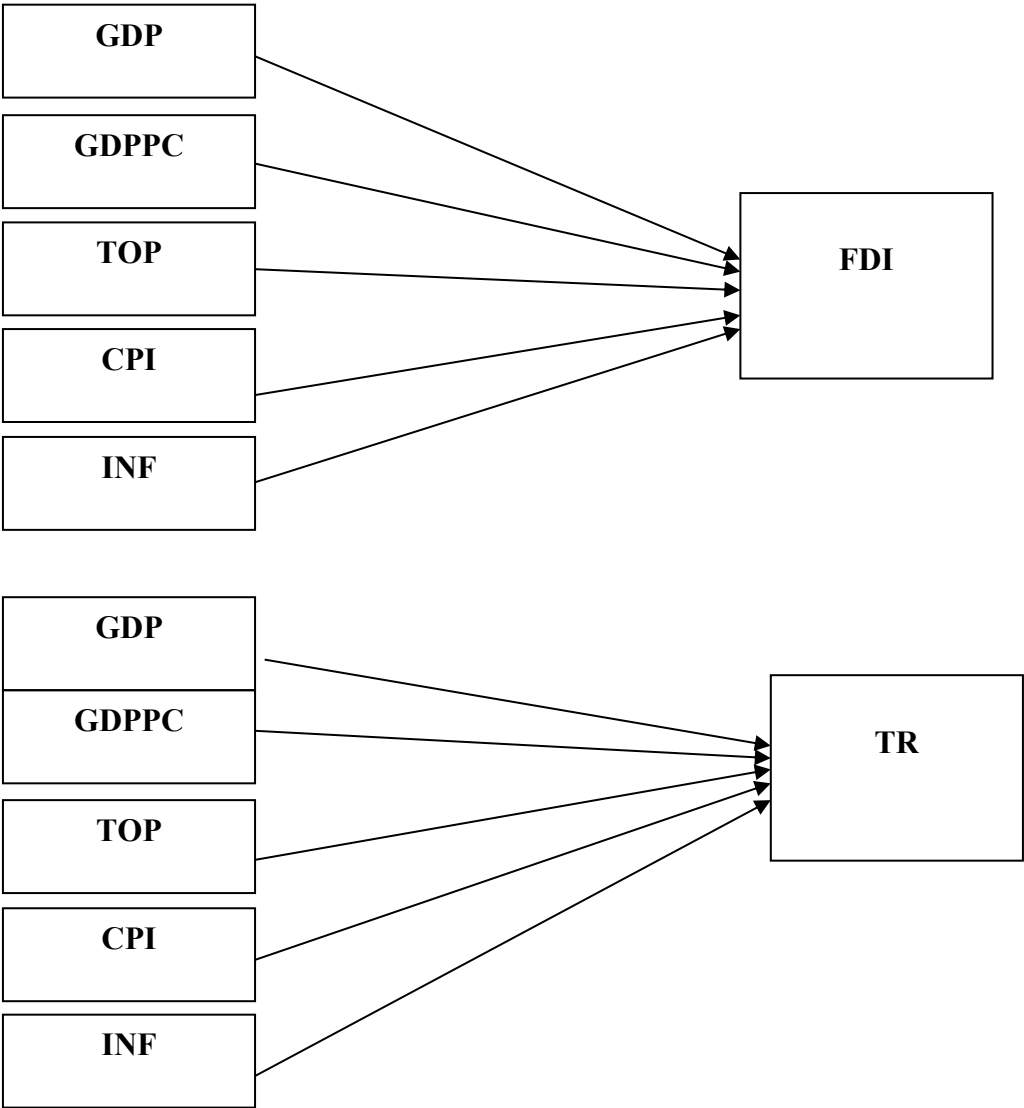
Evidence from around the world shows that corruption in income Management is a serious problem in some countries, corruption in tax affairs It was so indigenous that the government shut down the current government and started working new one, for example in Peru and Uganda. In many developing countries, applications to Low-wage customs jobs are very expensive compared to other similarly paid jobs the government shows that extra money can be made potentially (Abed and Gupta 2002).

2Even theory does not provide a clear-cut answer on the relationship between tax rates and the degree of compliance. In the event of being caught, if the fine depends on the amount of income concealed or the amount of tax concealed the reduction in tax rates may lead to an increase or decrease in the degree of compliance (see Ivanova et al., 2005 for a literature review).

Evidence has shown that where there are revenue management processes Be more modern, such as creating large, fully functional taxpayers The office (LTO) and computer from the customs process, collect revenue It has improved and reduced corrupt practices (Dos Santos, 1995).

2.8- Conceptual Framework

Based on a comprehensive review of the related literature written by different scholars, the following conceptual framework has been developed. The theory demonstrates that GDP, GDPPC, CPI, INF and TOP as independent variables have impact on FDI and TR. Through development of this conceptual framework, this study contributes to the pool of knowledge and research in this specific area which has not been yet done in the context of Afghanistan.



Note: (FDI) *Stands for Foreign Direct Investment*, (TR) *Stands for Tax Revenue*, (GDP) *stands for Gross Domestic Product*; (GDPPC) *Stands for Gross Domestic product per capita*, (TOP) *stands Trade Openness*, (CPI) *Stands for Corruption Perception Index* and (INF) *Stands for Inflation / Consumed Price Index*.

3. Research Methodology

This chapter explains the statistical techniques used to determine the relationship between Corruption on Tax Revenues & foreign direct investment in Afghanistan. This chapter includes empirical estimation model, variables and data sources.

Research Design

Research design reflects the total process of the research which involves conceptualizing a problem, research questions, methodology and conclusion of a study (Harwell, 2011). This research adapts the positive philosophy which allows the researcher to study the relationship between variables and develop mathematical models to investigate the relationship between quantitative measurements. The research design adopted for data analysis in this study follows the quantitative approach which is often described as deductive in nature.

Operationalization and Data Sources

This study used annual time series data for the period spanning from 2003-2019 to analyze the Impact of Corruption on Tax Revenues & foreign direct investment in Afghanistan. For which the data is available separately. The data for all variables have been extracted from Ministry of Finance (ARD), World Bank, IMF, IFS, and Trading Economics.

Definition of Variables

Description of Variable /Operationalization

Table 1.1- Variables which affect FDI

Variable	Description	Sources	Expected Sign
Dependent Variables			
Foreign Direct Investment (FDI)	Foreign Direct Investment is an investment involving long term relationship between individuals and firms from one country into another country.	OECD 1996	
Independent Variables			

Corruption Perception Index (CPI)	Is an index published annually by Berlin-based Transparency International since 1995 which ranks countries "by their perceived levels of public sector corruption, as determined by expert assessments and opinion surveys.	Transparency International the global coalition against Corruption 2003-2019	Negative
GDP	GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.	Macrotrends 2003-2019	Positive
GDP Per Capita	A Country's economic growth is measured by GDP per capita and GDPPC growth is known as the proxy for development level of a country or the development level of a nation's standard of living.	Aghion,1992& Fiorillo, 2001	Positive
Trade Openers	Trade openness is considered as an extent to which a country is flexible and accessible to foreign investment and international trade. The degree of trade openness is measured by the actual size of registered imports and exports of a country excluding illicit trade.	Chen and Gupta, 2009; Gbolonyo, 2019.	Positive
Inflation / Consumed Price Index (CPI)	The Consumer Price Index (CPI) is a measure that examines the weighted average of prices of a basket of consumer goods and	Macrotrends 2003-2019	Positive

	<p>services, such as transportation, food, and medical care.</p> <p>Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly.</p>		
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Table 1.2- Variables which affect Tax Revenue

Variable	Description	Sources	Expected Sign
Dependent Variables			
Tax Revenue	A revenue service, revenue agency or taxation authority is a government agency responsible for the intake of government revenue.	Ministry of Finance /Afghanistan Revenue Department (ARD) 2003-2019	
Independent Variables			
Corruption Perception Index (CPI)	Is an index published annually by Berlin-based Transparency International since 1995 which ranks countries "by their perceived levels of public sector corruption, as determined by expert assessments and opinion surveys.	Transparency International the global coalition against Corruption 2003-2019	Negative

GDP	GDP at purchaser's prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products.	Macrotrends 2006-2019	Positive
GDP Per Capita	A Country's economic growth is measured by GDP per capita and GDPPC growth is known as the proxy for development level of a country or the development level of a nation's standard of living.	Aghion,1992& Fiorillo, 2001	Positive
Trade Openers	Trade openness is considered as an extent to which a country is flexible and accessible to foreign investment and international trade. The degree of trade openness is measured by the actual size of registered imports and exports of a country excluding illicit trade.	Chen and Gupta, 2009; Gbolonyo, 2019.	Positive
Inflation Consumed / Price Index (CPI)	The Consumer Price Index (CPI) is a measure that examines the weighted average of prices of a basket of consumer goods and services, such as transportation, food, and medical care. Inflation as measured by the consumer price index reflects the annual percentage change in the cost to the average consumer of acquiring a basket of goods and services that may be fixed or changed at specified intervals, such as yearly.	Macrotrends 2006-2019	Positive

Empirical Model

Following the existing empirical models applied by Yokoyam and Alemu (2009); Gbolonyo (2019); Hesse (2009); and Hodey et al. (2015) few modifications have been applied based on the explanatory variable in previous, therefore, the model to be estimated is written as;

$$FDI_{ij} = a + \beta_1 GDP_j + \beta_2 GDP\ per\ Capita_{ij} + \beta_3 TOP_{ij} + \beta_4 CPI_j + \beta_5 Inf_{ij} + \epsilon_{ij} \dots (1)$$

$$TR_{ij} = a + \beta_1 GDP_j + \beta_2 GDP\ per\ Capita_{ij} + \beta_3 TOP_{ij} + \beta_4 CPI_j + \beta_5 Inf_{ij} + \epsilon_{ij} \dots (2)$$

Where

- FDI_{ij} is the foreign direct investment
- TR_{ij} is the Tax Revenue
- $GDPPC_{ij}$ is the GDP per capita growth
- TOP_{ij} is the trade openness
- CPI is the corruption perception index
- Inf is the level of inflation.

Data Employed

This study used annual time series data for the period spanning from 2003 to 2019 to analyze the Impact of Corruption on Tax Revenues & foreign direct investment in Afghanistan. The following data have been extracted separately from Ministry of Finance (ARD), World Bank, IMF, IFS, and Trading Economics. The data for foreign direct investment (FDI) has been extracted from OECD 1996. The data for Tax Revenue (TR) had been extracted from Ministry of Finance /Afghanistan Revenue Department (ARD) 2003-2019. The data for Corruption Perception Index (CPI) has been extracted from Transparency International the global coalition against Corruption 2003-2019. The data for Gross Domestic product per capita (GDPPC) has been extracted from World Bank. The data for Trade Openness (TOP) has been extracted from UNCOMTRADE and data for Inflation / Consumed Price Index (CPI) has been extracted from Macrotrends 2003-2019.

Table 1.3- Representation of the Variables 2003-2019

Year	FDI (in million US \$)	TR (in million US \$)	CPI (%)	GDP (in US \$)	GDPPC (in US \$)	TOP (%)	INF (%)
2003	212	621	1.5	623	236	46.32	7.23
2004	243	634	1.6	654	246	47.87	6.54
2005	221	637	1.7	659	256	48.23	6.98
2006	238	641	1.7	697	264	49.71	6.78
2007	188.69	674	1.8	975	360	50.28	8.68
2008	40.35	909	1.5	1,011	365	51.99	26.42
2009	56.11	1,292	1.3	1,244	438	49.07	-6.81
2010	190.77	1,753	1.4	1,586	543	51.76	2.18
2011	52.17	2,076	1.5	175	593	53.52	11.80
2012	56.82	1,577	0.8	200	642	56.67	6.44
2013	48.31	1,930	0.8	2,056	637	52.77	7.39
2014	42.98	1,737	1.2	2,048	614	47.78	4.67
2015	169.15	1,911	1.1	1,991	578	47.72	-0.66
2016	93.59	2,270	1.5	1,802	509	41.56	4.38
2017	51.53	2,485	1.5	1,887	520	42.26	4.98
2018	139.2	2,583	1.6	1,835	494	46.76	0.63
2019	95.36	2,586	1.1	1,929	570	45.06	2.3

Note: The abbreviations used in the above table stand for the terms in brackets respective FDI (foreign direct investment), TR (Tax Revenue), and CPI (Corruption Perception Index), GDP (Gross Domestic product), GDPPC (Gross Domestic product Per Capita), TOP (Trade Openness) and INF (Inflation / Consumed Price Index).

4. Data Analysis and Findings

As stated in the introduction, this paper investigates two issues – first, the effect of corruption on inward foreign direct investments and second, the simulated impact of a three-point improvement in the CPI scores on FDI and taxable revenues of Afghanistan. Multiple regressions are used to determine the impact of CPI on FDI. Cross-section data from Afghanistan for 2003 form the basis of the empirical investigation. Data on FDI flows is from the International Financial Statistics (IFS). Country-level data on Gross Domestic Product and other independent variables are from the World Development Report and the IFS. Information on capital controls is from the International Monetary Fund's annual report on Exchange Arrangements and Exchange Restrictions for 2003. Data on the rate of return on US FDI in various countries is from the Survey of Current Business. Country-level data on tax revenue from corporate income tax is from the Afghanistan Revenue Department.

In the absence of any direct and objective measures of corruption, this study uses the TI assigned scores on the perception of corruption in various countries. This Corruption Perception Index (CPI) has been compiled since 1995, progressively for a greater number of countries. We use the 2003 CPI in our empirical analysis. The 2003 CPI index was compiled using up to ten different surveys that measured corruption by collecting data about the (subjective) perception on corruption of residents as well as foreigners.

The principal sources used by the TI include the World Competitiveness Report, the Institute for Management Development, Political and Economic Risk Consultancy, DRI/McGraw- Hill Global Risk Service, Political Risk Services, and anonymous contributions made by employees of multi-national firms, institutions and others. The surveys cover perceptions on administrative as well as political corruption, which is typically defined as the use of public power and monies for personal/private gain.

TI has released the CPI index each year since 1995. All CPI scores are based on multiple sources, which are given equal weight. The 1995 index ranked 41 countries, the 1996 index ranked 54 countries, and the 1997 index ranked 52 countries. The 1998 index ranked 84 countries and reflects the tendency of the index to get more comprehensive with the passage of time. Most of the countries included in the 1995 index are also ranked in subsequent years. While some of the developing countries added in 1996 were not included in later years, many new countries were added. The rankings of countries on the basis of their CPI scores are not found to change greatly from year to year, reflecting the entrenched nature of corruption. TI has used different sources and slightly different methods to arrive

at its country CPIs and rankings but this has not changed the country rankings greatly from year to year.

4.2. Data Reliability Test

FDI

In order to see the effect of the different explanatory variables on FDI, we build up a series in which for Afghanistan.

In the following section we use the program E-views to run the regressions. In all cases we apply the least squares method to calculate the coefficients when we run the regressions. As this is a cross section analysis and the White test showed that in several regressions there was heteroscedasticity, which distorts the t-statistic, we use the White heteroscedasticity consistent estimator to calculate the parameters; in order to have more accurate results.

4.3. Descriptive Statistics Analysis & Findings

4.3.1- Total Result FDI

In the table we can see the results when we used the formula (1):

$$FDI_{ij} = a + \beta_1 GDP_j + \beta_2 GDP\ per\ Capita_{ij} + \beta_3 TOP_{ij} + \beta_4 CPI_j + \beta_5 Inf_{ij} + \epsilon_{ij} \quad (1)$$

$$FDI_{ij} = a + \beta_1 GDP_j + \beta_4 CPI_j + \beta_5 Inf_{ij} + \epsilon_{ij} \quad (2)$$

$$FDI_{ij} = a + \beta_1 GDP_j + \beta_4 CPI_j + \beta_3 TOP_{ij} + \epsilon_{ij} \quad (3)$$

Table1- Regression results table, independent variable FDI

Dependent Variable: FDI

Method: Least Squares

Date: 06/27/21 Time: 12:35

Sample: 2003 2019

Included observations: 17

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	92.30887	253.1351	0.364663	0.7223
CPI	20.59271	67.74042	0.303994	0.7668
GDP	0.123642	0.073138	1.690518	0.1190
GDPPC	-0.230256	0.157684	-1.460241	0.1722
INF	-3.770748	2.144672	-1.758194	0.1065
TOP	1.885983	3.914535	0.481790	0.6394
R-squared	0.713146	Mean dependent var		125.8253
Adjusted R-squared	0.582758	S.D. dependent var		77.35275
S.E. of regression	49.96545	Akaike info criterion		10.93111
Sum squared residue	27462.01	Schwarz criterion		11.22518
Log likelihood	-86.91439	Hannan-Quinn criter.		10.96034

F-statistic	5.469407	Durbin-Watson stat	2.727743
Probe(F-statistic)	0.009036		

By

observing equation 1, we can see that the signs of all coefficients are as expected.

Coefficients β_1 , β_3 and β_4 are positive and β_2 & β_5 is negative. Nonetheless only GDP is a significant variable at the 0, 01% levels, while TOP, INF, CPI and GDP per Capita are significant but at lower levels. When GDP per capita and CPI are put together they are not significant at 0, 05% level. The main reason for this is that there is a strong autocorrelation between these two variables.

This is already an interesting finding in itself, showing that there is a positive correlation between GDP per capita and CPI. Meaning that in general, countries with higher GDP per capita have lower levels of corruption, or that countries with lower levels of corruption in general have higher levels of GDP per capita. With this alone we cannot determine which the relation is, or even if one variable determines another, but we can clearly see that they are correlated. This would be even more so if we included other countries, such as developed ones, where in general they have higher GDP per capita and lower corruption. Anyway, this would be an interesting topic for another paper.

To try to solve this, we run two new regressions (2). Both are excluding GDP per capita. One is explained FDI by GDP, inflation and the corruption level, and the other is explained by GDP, Trade openers and the corruption level.

$$FDI_{ij} = a + \beta_1 GDP_j + \beta_4 CPI_j + \beta_5 Inf_j + \varepsilon_{ij} \quad (2)$$

Table2- Regression2 results table, independent variable FDI

Dependent Variable: FDI

Method: Least Squares

Date: 07/08/21 Time: 21:24

Sample: 2003 2019

Included observations: 17

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.310657	64.19492	-0.004839	0.9962
GDP	0.190247	0.058023	3.278853	0.0060
CPI	56.98364	52.98455	1.075477	0.3017
INF	-2.892817	1.900945	-1.521778	0.1520
R-squared	0.655205	Mean dependent var		125.8253
Adjusted R-squared	0.575637	S.D. dependent var		77.35275
S.E. of regression	50.39003	Akaike info criterion		10.87979
Sum squared resid	33009.02	Schwarz criterion		11.07584

In	Log likelihood	-88.47820	Hannan-Quinn criter.	10.89928
	F-statistic	8.234514	Durbin-Watson stat	2.721478
	Prob(F-statistic)	0.002510		

equations (2) we eliminate GDP per capita as an explanatory variable. So FDI from one year to another is explained by GDP of the Afghanistan, inflation and the corruption level. The result, in table 2, shows us that in this new regression all three explanatory variables become significant at 0,01% level and the coefficients have the sign we expected: β_1 and β_4 are positive and β_5 is negative. The adjusted R-squared is of 0,288, showing that the variables do explain to some extent the amount of FDI. With this regression we can clearly state that the first part of our thesis is approved: corruption does have a negative effect on FDI.

We also ran the regression to explained FDI by GDP, Trade Openers and corporation level. This is equation (3):

$$FDI_{ij} = a + \beta_1 GDP_j + \beta_4 CPI_j + \beta_3 TOP_{ij} + \varepsilon_{ij} \quad (3)$$

Table3- Regression3 results table, independent variable FDI

Dependent Variable: FDI

Method: Least Squares

Date: 07/08/21 Time: 21:41

Sample: 2003 2019

Included observations: 17

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	83.57410	224.3086	0.372585	0.7155
GDP	0.197304	0.064272	3.069841	0.0090
CPI	33.37581	61.25923	0.544829	0.5951
TOP	-1.444966	3.784434	-0.381818	0.7088
R-squared	0.598288	Mean dependent var		125.8253
Adjusted R-squared	0.505585	S.D. dependent var		77.35275
S.E. of regression	54.39029	Akaike info criterion		11.03257
Sum squared resid	38457.94	Schwarz criterion		11.22862
Log likelihood	-89.77687	Hannan-Quinn criter.		11.05206
F-statistic	6.453837	Durbin-Watson stat		2.338156
Prob(F-statistic)	0.006531			

In table 3 we can observe the results. In this case, eliminating the autocorrelation, GDP becomes significant at a 0, 01% level. The coefficient is positive, as we expected, confirming that higher GDP

should attract more foreign direct investment. The R-squared, is similar (but slightly lower) to equation (2). So, we can see that when we eliminate the autocorrelation between CPI and GDP, both variables become significant with a high degree of confidence. One interesting factor is that in regression 3, TOP is a significant variable, while in regression 3 it is only significant at a 10% level. This means that when we use corruption in the equation, TOP does become significant.

As the focus of the paper is to analyze the impact of corruption on FDI we shall concentrate on regression 2. This regression shows that all three variables are significant at a 0, 01 percent level, in explaining FDI. As expected, GDP has a positive coefficient, meaning that a higher GDP will attract more FDI. The CPI coefficient is also positive, showing that less corruption (higher CPI) has a positive effect on FDI. The distance coefficient is negative, as expected, showing that inflation and TOP have a negative effect on FDI. Having this in mind we shall continue our analyses to see if we can find any distinction on the effect of corruption on CPI depending on the origin of the capital.

4.3.2- Total Result Tax Revenue

In the table we can see the results when we used the formula (1):

$$TR_{ij} = a + \beta_1 GDP_j + \beta_2 GDP\ per\ Capita_{ij} + \beta_3 TOP_{ij} + \beta_4 CPI_j + \beta_5 Inf_{ij} + \varepsilon_{ij} \quad (1)$$

$$TR_{ij} = a + \beta_1 GDP_j + \beta_4 CPI_j + \beta_5 Inf_{ij} + \varepsilon_{ij} \quad (2)$$

$$TR_{ij} = a + \beta_1 GDP_j + \beta_4 CPI_j + \beta_3 TOP_{ij} + \varepsilon_{ij} \quad (3)$$

Table4- Regression4 results table, independent variable TR

Tax rev

Dependent Variable: TAXREV

Method: Least Squares

Date: 06/27/21 Time: 12:38

Sample: 2003 2019

Included observations: 17

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2280.461	1446.470	1.576570	0.1432
CPI	626.2126	387.0838	1.617770	0.1340
GDP	-0.666413	0.417928	-1.594561	0.1391
GDPPC	4.433990	0.901040	4.920969	0.0005
INF	-4.278683	12.25513	-0.349134	0.7336
TOP	-69.76148	22.36852	-3.118735	0.0098

R-squared	0.897769	Mean dependent var	1548.458
Adjusted R-squared	0.851300	S.D. dependent var	740.4094
S.E. of regression	285.5137	Akaike info criterion	14.41702
Sum squared resid	896698.7	Schwarz criterion	14.71110
Log likelihood	-116.5447	Hannan-Quinn criter.	14.44625
F-statistic	19.31989	Durbin-Watson stat	1.192126
Prob(F-statistic)	0.000041		

By observing Table 4, we can see that the signs of all coefficients are as expected.

Coefficients β_2 and β_3 are positive and β_1 , β_4 and β_5 are negative. Nonetheless GDPPC & TOP are significant variable at the 0, 01% levels, while, INF, CPI and GDP are significant but at lower levels. When GDP and CPI are put together, they are not significant at 0, 05% level. The main reason for this is that there is a strong autocorrelation between these two variables.

This is already an interesting finding in itself, showing that there is a positive correlation between GDP and CPI. Meaning that in general, higher GDP have lower levels of corruption, or that lower levels of corruption in general have higher levels of GDP.

To try to solve this, we run two new regressions (2). Both are excluding GDP per capita. One is explained Tax Revenue by GDP, inflation and the corruption level, and the other is explained by GDP, Trade openers and the corruption level.

$$TR_{ij} = a + \beta_1 GDP_j + \beta_4 CPI_j + \beta_5 Inf_j + \epsilon_{ij} \quad (2)$$

Table 5-Regression5 results table, independent variable TR

In table 5 we can observe the results. GDP becomes significant at a 0, 05% level and GDP can explain tax revenue in good way. The coefficient is negative, and b increase 1% GDP, tax revenue will increase by 2 %. And about CPI & INF are significant at low level and can explain tax revenue as well, and CPI has positive coefficient with tax revenue, if CPI increase by 1% tax revenue decrease by 179% and this show high level of impact that corruption has in tax revenue. And by increase of 1% INF, tax revenue will increase by 29%. And over all GDP, CPI and INF explain tax revenue in good way. We also ran the regression to explained TR by CPI, Trade Openers and GDP. This is equation (3):

Table6: Regression6 results table, independent variable TR

$$TR_{ij} = a + \beta_1 GDP_j + \beta_4 CPI_j + \beta_3 TOP_j + \varepsilon_{ij}$$

Dependent Variable: TR
 Method: Least Squares
 Date: 07/13/21 Time: 14:05
 Sample: 2003 2019
 Included observations: 17

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6074.608	1984.280	3.061367	0.0091
GDP	-1.802956	0.568561	-3.171083	0.0074
CPI	-405.9583	541.9117	-0.749123	0.4671
TOP	-68.78732	33.47788	-2.054710	0.0606
R-squared	0.656915	Mean dependent var		1548.471
Adjusted R-squared	0.577742	S.D. dependent var		740.4392
S.E. of regression	481.1476	Akaike info criterion		15.39255
Sum squared resid	3009540.	Schwarz criterion		15.58860
Log likelihood	-126.8367	Hannan-Quinn criter.		15.41204
F-statistic	8.297176	Durbin-Watson stat		1.298824
Prob(F-statistic)	0.002433			

Dependent Variable: TR
 Method: Least Squares
 Date: 07/11/21 Time: 09:13
 Sample: 2003 2019
 Included observations: 17

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2172.250	650.1865	3.340965	0.0053
GDP	-2.081601	0.587671	-3.542122	0.0036
CPI	179.1684	536.6443	0.333868	0.7438
INF	-29.23959	19.25338	-1.518673	0.1528
R-squared	0.613981	Mean dependent var		1548.471
Adjusted R-squared	0.524900	S.D. dependent var		740.4392
S.E. of regression	510.3662	Akaike info criterion		15.51046
Sum squared resid	3386158.	Schwarz criterion		15.70651
Log likelihood	-127.8389	Hannan-Quinn criter.		15.52995
F-statistic	6.892373	Durbin-Watson stat		1.017472
Prob(F-statistic)	0.005094			

And finally we can see the impact of GDP, CPI and TOP in Tax revenue, as we see table 6 GDP & TOP are significant at 0.05% level and CPI is significant at lower level. And as well coefficient shows when GDP increase by 1% Tax Revenue will decrease by 1.8% and about CPI that have more impact on TR when CPI increase by 1% the TR will decrease by 405% .

5. Conclusion and Recommendation

This article analyzes two main issues: the impact of corruption on FDI flows and the impact of CPI improvements on FDI flows and corporate tax revenue. The perception of high levels of corruption reduces FDI flows. Increasing external direct flows not only helps to bridge the savings and technology gap, but also provides non-debt sources to cover their current account deficits. In addition, an additional benefit of external direct flows is the additional revenue that host governments can generate through FDI income tax. Increasing tax revenues due to a threefold improvement in CPI can almost increase tax revenues.

Determining the potential impact of reducing corruption on corporate income and corporate tax revenues is the main contribution of this article. Past research efforts have generally established a link between corruption and FDI, but have not extended the analysis to estimates of how tax revenues will affect a successful corruption attack. It is important to note that the increase in estimated revenue in this article indicates an improvement in the general level of corruption. But corruption is rampant in tax collection, which has been reflected in poor tax efforts over the years, despite high tax rates. Any attempt to reduce corruption in the tax collection process improves revenue directly (through more collection) and indirectly (albeit by increasing the FDI and consequently taxable income). This article focuses on the latter, whereas if CPI scores increase due to reduced corruption in tax collection, it fully recognizes that earnings increases.

Given the differences in the source of capital, the results are not strong enough to suggest that there are significant differences in the effects of corruption on foreign direct investment. Nevertheless, the model used shows that foreign direct investment in Afghanistan is the most reasonable against this corruption. We can see that in the performed regressions, the coefficients of both are very important and have the highest values. This means that overall foreign direct investment from Afghanistan is more affected by corruption. Another interesting research topic. At first glance, we can assume that this is related to the level of corruption in the country of origin, but in fact the average CPI rate was 20.5 were. So this is not a good explanation.

5.2. Recommendation

The results of this paper imply that public policies should be implemented to reduce the level of corruption because they negatively affect the standard of living. Although it is not necessary to write this article to achieve these results, these results add to the number of ethical and social arguments as to why public policy should fight corruption vigorously, because despite the many cultural differences, we strongly defend this position. we do. It can be reduced by reducing the incentives to create corruption.

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