



COMPARISON OF THE IMPACT OF REGIME TYPE AND CORRUPTION ON GROWTH: CASE STUDIES-CHINA AND INDIA (2016-2020)

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Abstract - *There is always an image drawn in the mind that there is a largely negative relationship between corruption and the economic growth of any country, especially if this country is governed by a one-party political system and it is the opposite when it discussed about democratic regimes. Since economic growth necessarily reflects the standards of living and the well-being of peoples, it has become important to know the policies and the strategies that may support or limit it from different aspects. China and India, as case studies for this study, are considered similar countries in many characteristics such as population, economic strength and high level of corruption as well according to the international organizations that concerned with issues of growth and corruption, but they differ in their system of government. The study aims to collect the necessary published data from worldwide trusted and reliable international organizations on both countries in the period from 2014-2020 to know the extent to which growth indicators are affected by indicators of corruption under the different regimes through the use of a comparative method and case study as a quantitative research. Five main indicators will be taken for each variable with specifying the regime types to two main types: Autocracy which is for Chinese case and democracy which is for Indian case.*

Keywords: *Autocracy, Corruption, China, Democracy, Growth, India, Regime Type.*

INTRODUCTION

More corruption, authoritarian rule, slower economic growth is the equation that comes to mind when linking the three terms in any country. Although true from a broad and comprehensive perspective, it is not absolute in all cases. Many studies have attempted to provide definitive evidence of the negative impact of corruption on economic growth on a broad or narrow perspective but have failed at the experimental level far from their theoretical validity (Li and Wu, 2010). On the other hand, different studies have tried to find out the effect of nature and type of governance on the economic growth of countries, but they have faced the same fate as previous studies that examined the same with corruption. Moreover, most studies have divided the systems of governance into a democratic or a non-democratic one without looking at countries that are in transition in the system of government as we see in the Middle East after the so-called Arab Spring (Alon et al., 2016). Although they are among the top 10 countries in the world economy according to the World Bank ranking of countries, they remain in a relatively low classification when it comes to corruption, as they rank after 75 out of 179 countries around the world on the Transparency International scale. Here, it considers China and India, two Asian countries with similar characteristics in terms of the population of more than one and a half billion, the geographical proximity, high economic growth and the classification of low corruption, but they differ in the political regime type, where China has an autocratic system through the Communist Party while the democracy is considered the political basis of India (World Bank, 2022; CPI, 2020).

This study examines the impact of corruption and governance on economic growth by taking China and India because of their similarity as case studies to answer the question "Does regime type and corruption affect growth?". So, data is collected for indicators of each variable (Regime Type, Corruption and Growth) and then analyze the data by testing the validity of the argument, measuring the correlation and possible regression analysis among all variables.



The main objective of this study is to find out how the economic growth factors of countries, which are the basic core of people's well-being and their ability to overcome various local problems, are affected. In addition, to investigate how the regimes could work under some corruption factors and what they can do or what are policies that they can implement in order to reduce their effect on the people's daily lives. This can be discovered by checking two of the world's leading countries, namely China and India as they have a high economies ranking and low corruption ranking according to the tested indicators from the World Bank and Transparency International. Recently there have been many revolutions and movements of change and reform, especially in the Arab countries, and perhaps the main motivation that made people go to the street is the deteriorating economic situation. So, it is considered to study the factors that can affect economic growth associated with the tide of people's satisfaction or indignation.

By separating the growth data into five key indicators (GDP Growth, Foreign Direct Investment (FDI), Employment, Inflation and Savings) and studying the relationship with the five key indicators of corruption (Corruption Perception Index (CPI), Control of Corruption, Voice and Accountability, Rule of Law, Political and Economic Risk Index of Economic Freedom (IFE)), we will know how closely the existence of a regime type exists as a control (dummy) variable between democratic regime type (as represented by India) and an autocratic regime type (represented by China) by giving it fixed values to be measured by them.

1. Regime, Growth and Corruption

Talking about the different concepts of economic growth, corruption regime types is branching into several levels. The presentation of these concepts could be done by highlighting the most important definitions and types associated with each concept. Starting with economic growth which can be defined as an increase in the total production of goods and services mainly, and it is usually measured through the gross domestic product, which expresses the quantity of goods and services produced for the purpose of sale, whether they are sold locally or overseas (Acemoglu, 2012) . Rostow (1959) suggested that we have five main stages for achieving economic growth which are: traditional society, prediction for take-off, take-off, drive to maturity and finally high mass-consumption. These steps seem to encourage countries to reach efficient and desirable economic growth for the sake of better standards of life for individuals, but despite that, we cannot generalize these steps to all cases for several reasons, the most important of which is that the traditional society does not necessarily exist in order to start economic growth. There are some features that can exist from a previous stage in a later stage, or at least remnants of these features. It is difficult to determine the end of each stage and the beginning of the next stage and the conditions of each stage. It is not applicable to all countries because of their different nature and background, especially developing countries (Itagaki, 1963). Van Meerhaeghe (2013) argued that economic growth is affected by several factors accompanied by the institutional, political and social conditions of the state, all of which work together to reach the required growth rates, these factors are: population, capital, education, natural condition and technological advances. The importance and number of factors vary according to the situation to be measured and to the different circumstances of the state and is directly affected by the level of growth.

Corruption is a multi-directional issue, with different theories that address it, its causes and how it occurs. Transparency International (2021) defines corruption as "the abuse of entrusted power for private gain", therefore, it can happen everywhere, and it can include anyone with different positions and jobs, and often it happens in secret or in the shadows, and finally it changes to adapt to different circumstances. The impact and cost of corruption does not depend on a certain level, but rather it has different costs in several areas, as it has political costs that may limit the freedom of individuals and the rule of law in society, and social costs that are reflected in the extent of the individual's confidence in his government, as well as economic costs in terms of inequality Opportunities to obtain the same benefits and wealth, and finally environmental costs as they may affect the individual's access to a healthy environment and a sustainable future. What drives any person to become corrupt, exposing him to severe legal and social consequences if it is discovered? Is the person responsible really aware of the possible consequences of corruption before doing it? The consequences of

corruption may be small and unnoticed, and may be large and cumulative, affecting the country's economy (Enste & Heldman, 2018). De Graaf (2007) tried to classify the different causes and theories of corruption, as he clarified that there are six main causes of corruption, addressed through several fields, the causal chain, and the level of analysis of causes, the level of analysis of corruption, the context and the most common research methods for each cause, these causes are public choice theory, bad apple theories, organizational culture theory, clashing moral values theories, the ethos of public administration theories and correlation (theories).

As for the regime type, it was addressed by clarifying its types related to the number of people involved in the political process and the common interests of them which can be summarized in three main terms: Tyranny, Oligarchy and Democracy on the one hand, and the amount of power that the government wields towards its people which can be illustrated as Totalitarian, Autocratic, Authoritarian, Constitutional and Anarchical on the other hand. Democracy or "rule by people", it gives the people power through the possibility of participating in choosing their rulers. Starting with direct democracy, which means direct rule by the people without choosing their representatives, and it comes in its simplified form with periodic city or town meetings held by citizens to solve their problems directly. On the other hand, Representative democracy, in this model, citizens choose their own representatives to represent them and make decisions on their behalf, and if these representatives do not do their part or disappoint the voters, they can be changed simply by voting in the next election. Countries that follow this system are called republic. There are two types of this model: one, presidential democracy in which citizens choose legislators and executives separately, so that no one can be a legislator and an executive at the same time. Two, parliamentary democracy in which citizens choose the legislators who make up Parliament, who in turn choose their executive, the Prime Minister (Held, 2006) .

In general, addressing these previous concepts gave an overview of the main understanding of them, which helps in applying these theories and definitions in reality, and on the case studies for this thesis, China and India.

2. Governance and Economy in China and India Before 2016

2.1 Governance in China

From poor and developing country at the beginning of the 19th century to one of the leading and developed countries in the 21st century. This is the very simple explanation of the China's journey and changes that it had experienced during its history. The People's Republic of China (PRC) was founded in 1949 and led by the Chinese Communist Party (CCP) or Communist Party of China (CPC). The Chinese Communist Party itself was established in 1921 in Shanghai by Li Dazhao and Chen Duxiu, inspired by ideas from the Marxist Leninist movement in government and the Bolshevik movement that had victory in the Russian revolution of 1917, which focuses on the workers class and against imperialism, capitalism and feudalism (PRC Embassy in SA, 2021) .

The Chinese National Party or Kuomintang (KMT) was ruling China 1928 to 1949 in the republican era of China when it was called Republic of China (ROC), and they went into a civil war with the CCP between 1927 to 1937, as the first stage, and between 1945 to 1949, as the second stage which also called Chinese Communist Revolution led by Mao Zedong, who is consider as the founder of PRC. The hostile conflict between the two parties about was halted between 1937 to 1945 as both sides allied against the Japanese invasion of China, but regionalism or provincialism continued after that between the two parties and produced a different view about the best way of governing the country from their ideologies' point of view (Cucchisi, 2002) (Williams, 2022).

And since the end of the Chinese Communist Revolution in 1949, the CCP is ruling China until this day with an increasing influence over the country as the member of the party reached more than 85 million members in 2017, which make it the biggest political party in the world in terms of the members' number. These members' professions are varied from industrial workers, workers in agriculture and fishing, government or CCP employees, management, students, retirees to other professions. Also females were encouraged to be part of the party with about 20 million members from the total number of the party's members (China Today, 1997) .

2.2 Economy of China

The Chinese economic giant went through several economic changes that led it to become the state it is in now, turning from an economy based on agriculture as a main source of state income, to a major world industrial country with diverse sources of income. Four out of five Chinese worked in agriculture in farms from the beginning of the modern history of China 1949 to nearly 1978, and this number almost became one out of two in the 90s (Hu & Khan, 1997) .

We can divide the tremendous economic development taking place in modern China into three different stages: the post-1949 Mao socialist period, the period of economic reforms and opening up after 1978, and the post-1990s and new millennium period. Those stages had many ups and downs with a lot of characteristics, but it is clear that the Chinese economy found the right way after despite many obstacles and the downs gave them an additional immunity to build a strong leading economy today (Duceux, 2019) .

The following Figure 1 showing the change of China's GDP since 1960 according to the World Bank. Data is shown until 2015, which is the year before the period of this study (2016-2020).

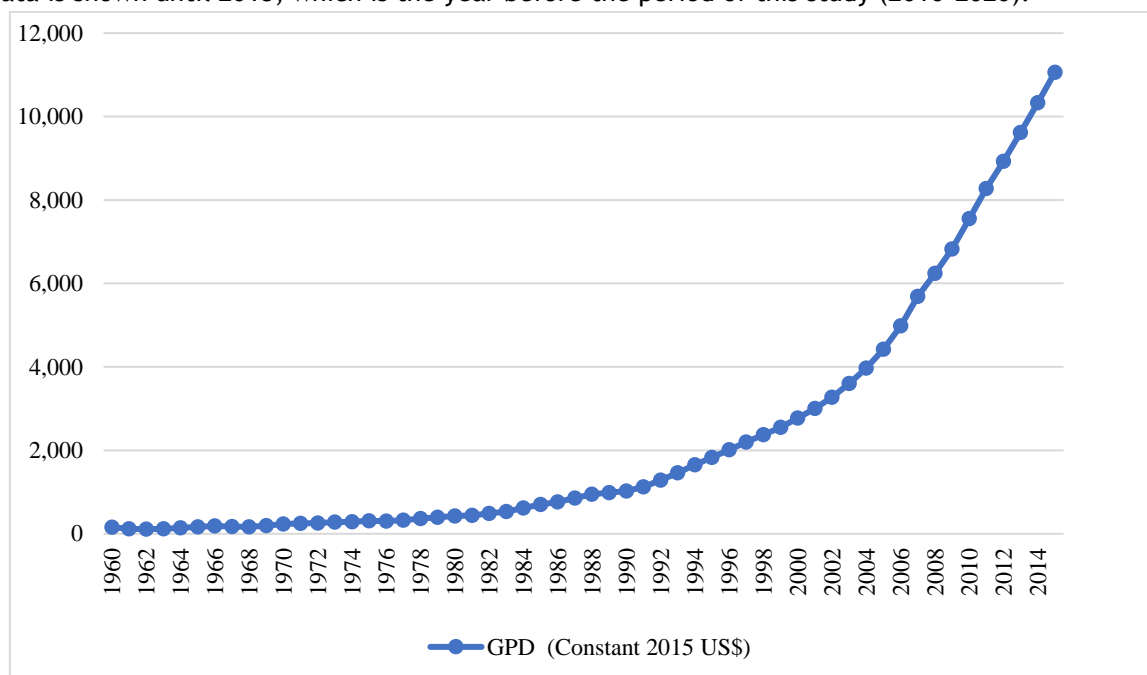


Figure 1 GDP (Constant 2015 US\$) - China (1960-2015)

Source: World Bank Data, (2016a). China's GDP (constant 2015 US\$), Web Address: <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?end=2015&locations=CN&start=1960>

It's obvious that China's GDP was increasing in general. In Mao's time it was significantly low because of the economic uncertainty the failure of the Great Leap Forward which led to famine as we discussed earlier. And starting from 1978, which was the beginning of Deng's economic wide reforms, we can see the increasing of the curve year after year, as these reforms had long term positive impacts on China's economic activities. Then in the beginning of the 21st century with more emphasizing in productivity and exporting we can notice higher GDP boom that continued until present time. Today China is consider as the factory of the world in many different fields such as: electronics, transportation devices, food processing, textiles manufacturing, cement and others (Page, 2022) .

2.3 Governance in India

India, one of the oldest civilizations, it is a part of a subcontinent that has undergone great changes, both positive and negative, over the centuries. The political system in India has historically suffered from instability, as the age of exploration in the eighteenth century was the beginning of the British colonization of India, and accordingly the system of government was determined by the British and what corresponded to their policy. This British influence lasted for about two hundred years until

India gained its independence in 15th of August 1947. We can divide the governance in India historically into two periods, first, during the British rule, second, after the independence (Elections.in, 2014).

India or Bharat is a "Sovereign Socialist Secular Democratic Republic" with a parliamentary system with a Council of Ministers headed by the prime minister who gives the advices for the head of the country by the constitution, the President. Federal system is part of the structure as every state has its own Council of Ministers that headed by the Chief Minster who is advices the Governor of the state. The power is divided between the Central Government and the State Government (Constitution of India, 1950).

The Indian constitution lays down the basic laws of politics in the country, defines the functions of the federal governments, and protects the rights of the people such as equality, freedom of speech and expression, movement, and others. Also, the government should work to the interests of the people. The historical social Caste system still plays an important role and a basic factor in politics, although the constitution prohibits class discrimination and the differences it may cause and an unfair distribution of education and jobs according to the caste system to which the individual belongs, with " Brahmins" at the top and " Dalits" at the bottom of the society according to this system (Price, 2022)

2.4 Economy of India

India has a long history in terms of economy, beginning with the Indus Valley Civilization, passing through the Mughal period, then British imperial rule in the middle of the eighteenth century with the beginning of the Age of Exploration, followed by the period after the end of British rule and the beginning of independence. India was the world's largest economic country between the first and seventeenth centuries, that is, with the end of British rule (Bairoch, 1995).

The twenty-first century and with technological progress, India has become a pioneer in the field of science and technology, which made its institutions clearly interested in the various services sector such as hotels, commerce, restaurants, transportation, business services, real estate and many others. This interest attracted foreign investment to the country, and the service sector became key in the proportion of India's exports and job creation (Cagliarini & Baker, 2020).

The following Figure 2 shows the changes that took place in India's GDP in constant 2015 US\$ during the period 1960-2015.

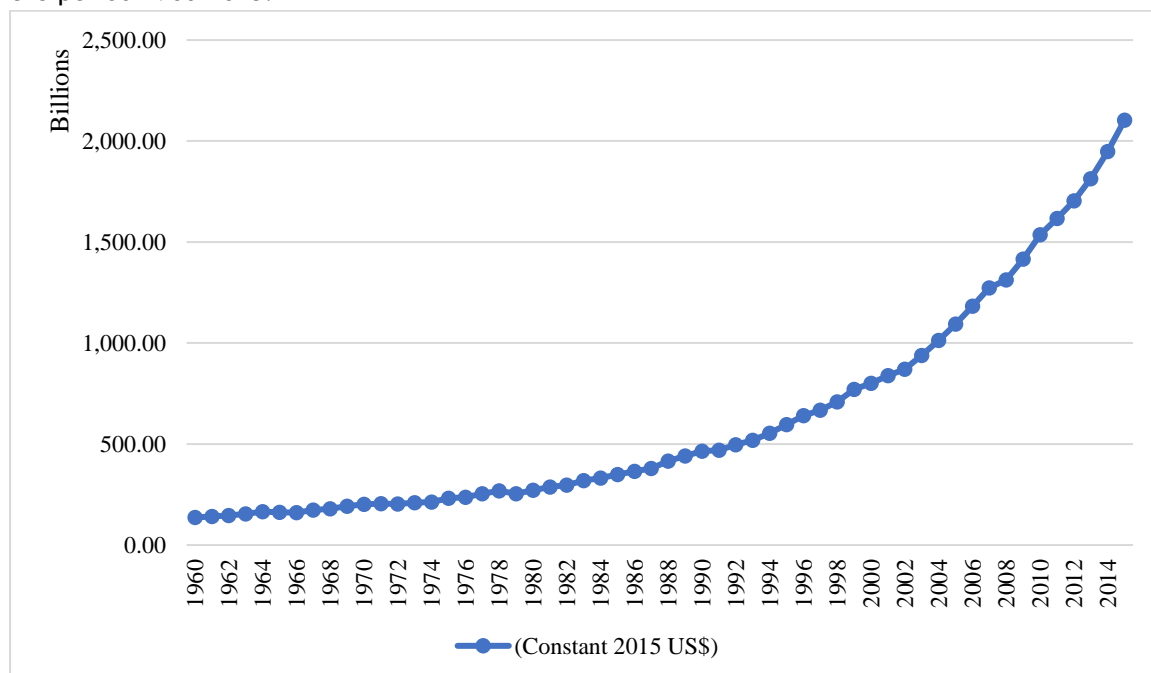


Figure 2: GDP (Constant 2015 US\$) - India (1960-2015)

Source: World Bank (2016b). India's GDP (constant 2015 US\$), Web Address:

<https://data.worldbank.org/indicator/NY.GDP.MKTP.KD?end=2015&locations=IN&start=1960>



It is clear here that India's gross domestic product began to rise since the beginning of the eighties, specifically with the reforms launched by the Prime Minister Indira Gandhi back then, which led to increased investment and liberalized economy, this rise continued steadily even with the nineties and the new millennium, which made India a global economic power (Cgijeddah, n.d) .

Governance and economy in China and India, after which, were basic stations, which were similar to each other in the economic aspect in particular. Both countries began their rule at the end of the fifties, China liberated with internal conflicts from the Kuomintang Party at the hands of the CCP leader, Zedong Mao, who adopted the central-communist model in decision-making, and India liberated from British imperialism that it controlled since the eighteenth century by the inspiring Mahatma Gandhi and built its first constitution on democratic foundations to help it build country after stability.

Both countries adopted the Soviet system in building the economy in the era of the Cold War, as they relied on the five-year plans system and activating the central supervision of the implementation of these plans, but the success of these plans was not always, but rather a temporary success, especially with the beginning of new periods of rule with the end of the fifties.

The failure of the Soviet model called on countries to carry out economic reforms for the important economic sectors of the state, and these reforms were also in the same period, which is the late seventies and early eighties. These reforms succeeded in varying degrees in making the economy run more smoothly and increasing the state's resources, which contributed to economic growth significantly. Each country was able to find what it excelled at and maintain it to be a permanent resource that contributes to prosperity and to reach the desired position for both countries. Accordingly, it is clear that the GDP of both countries is on the rise, especially with the twenty-first century, with a clear preference for China over India in this aspect.


3. The Impact of Regime Type and Corruption on Growth in China and India in 2016-2020 Period

China and India's corruption overview

Xi Jinping, the Chinese President and the head of CCP had said that about corruption's situation in China is still "severe and complicated", which implies how much the fight is against corruption is strong and continuing for the government since a long time (Bloomberg, 2022).

President Xi's terms of office are considered one of the most stringent periods in confronting the various forms of corruption in China, especially those related to the economy, because of their impact on the economic growth of countries in general and for a country with a huge economy like China. Since the beginning of the opening up of the Chinese economy in the early 1980s, there has been an environment ripe for corruption, especially in the transition phase from one economic form to another. This transformation required three entities: the business owner, a government institution, and a government official to approve the course of the process, and he is often part of the ruling party. The interaction of these three players paves the way for cases of corruption that are difficult to detect, because the transactions between them are completely legal. But - in an abnormal way - this corruption stimulated economic growth in this period, which is contrary to the prevailing idea that corruption impedes investment and thus growth. This form of growth spurred rather than slowed is attributed to the unique form of government structure that China is taking. Unlike the federal system in which people determine their rulers, Beijing sets the economic goals to be achieved for the lower levels in the different regions, and gives these regions freedom of how to achieve these goals. The more goals are reached by a government official at a certain level, the greater his chance of promotion. This flexibility gave possibilities for corruption on the one hand, but stimulated growth on the other hand (Huang, 2015).

Despite the organized anti-corruption campaigns carried out by the state, it still ranks late on the transparency international and Corruption Perception Index (CPI) as they were ranked 78 out of 179 countries in 2020. Ethicists argue that fighting corruption should be done out of the culture of the individuals and breaking down potentially corrupt relationships between the entities involved in the processes. Cases of corruption between officials are often covered up and others are motivated to do the same, which represents a kind of complicity. Historically, successive Chinese governments



have paid attention to administrative security at the expense of public welfare and basic justice for society, as officials have been interested in maintaining their positions by achieving the goals of the ruling party, which stimulated them to corruption and exploitation to show their competence in obtaining and continuing in their positions. (Bakken & Wang, 2021).

Corruption was prevalent historically in India since the era of the ruling British Empire, even before the partition with Pakistan, as the British ruler supported corruption and bribes to achieve his goals. Since that time, corruption has been present, recurring and deeply rooted in Indian society. Perhaps the main reason stems from the empowerment of some of the scientifically unqualified for some government positions, which makes available job opportunities fewer for qualified individuals or makes qualified people work in positions less than their qualifications, and therefore their job and financial satisfaction is low, which contributes to their attempt to earn illegal money to raise their financial satisfaction rate mainly, especially when they know that accountability will not be that strong to deter corruption attempts (Katyal, 2022) .

India ranked 86 out of 179 countries in Transparency International and Corruption Perception Index (CPI) in 2020. Forms of corruption in India can be classified into two main categories. First, grand theft or grand corruption, which takes place at the level of higher government departments and responsible organizations in the country, or at the high bureaucratic level, in which there is a common benefit between the parties involved in the process. Secondly, petty theft or petty corruption, which is the type in which various forms of corruption are carried out to obtain a benefit that must be obtained periodically and smoothly in the normal situation, and it is often at the lower levels of departments. The first type is more difficult to measure and treat because it is difficult to detect because of the collusion between the entities involved in the process, in contrast to the second type, which is easy to detect because the victims are more willing to provide information in the hope of taking some action against those involved (Transparency International India, 2002) .

The causes of corruption in India stem from social, political, administrative and economic causes that generate corruption on a daily basis. The old pre-independence issues, the political system and its use of money illegally, especially at the time of elections, the economic structure, which led to an unequal distribution of wealth, legal loopholes such as the need for prior approval of the government to investigate officials, administrative loopholes that give officials discretionary powers to interpret the law and thus the ease of carrying out corrupt processes, judicial delays due to lack of evidence or lack of protection for the complainants, and finally the social problems that are represented in the culture of citizens and their acceptance of the idea of bribery and corruption, all of these factors contributed to the explosion and increase of corruption in the state. These reasons contributed to India's position in the high levels of corruption, and directly affected the development processes, economic losses, damage at the level of national and social security, as well as the lack of public confidence in the system of government and its ability to eliminate corruption. Despite the difficulty of the current situation, it is possible to reduce corruption, it will not be easy to end it or it will happen overnight, but it is possible to take some steps to help reduce levels of corruption, such as: carrying out administrative reforms to bridge the gaps that can be exploited negatively, reforms and stricter oversight during elections and electoral campaigns, strengthening the role of independent institutions so that they have an effective public oversight role, enhancing the electronic transformation of the government so as to reduce direct communication between individuals and officials and thus reduce the chances of corruption, economic reforms to bridge the gaps and formalize the economy and finally social improvements through educating citizens about the short and long-term damages of corruption and making them interested in fighting corruption instead of being part of it (IAS Express, 2022).

The following Figure 3 is showing the CPI score for China and India in the period between (2015-2020):

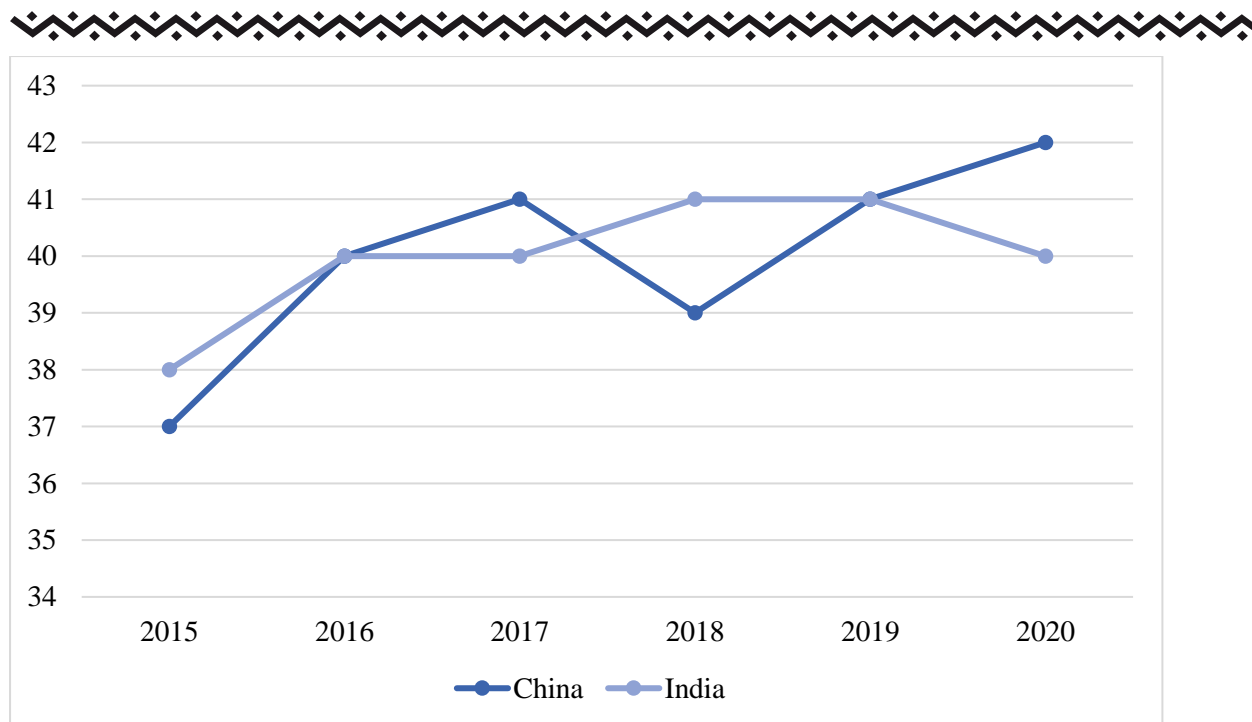


Figure 3: CPI Score for China and India (2015- 2020)

Source: Transparency International, Web Address: <https://www.transparency.org/en/cpi/2021>

Transparency International data indicate that corruption indicators did not change in 2020 from the years that preceded it in China and India, meaning that attempts to combat corruption during the first period of the epidemic did not affect the level of public corruption in the two countries, and that the level of corruption remained the same in the years that followed. It preceded the epidemic, as the score of China ranged between (37- 42) and India ranged between (38 -41) out of a total of 100, according to CPI. Accordingly, it can be said that the epidemic did not clearly affect the increase in the already high levels of corruption in the two countries.

4. Data analysis

In this part, the data will be presented in its raw form before it is processed and studied to find links between them in different ways. All data and figures collected from known sources were conducted according to some major limitations: decimal numbers were rounded to the nearest three digits, the time series is for five years (2016- 2020) and Microsoft Excel was used in the analysis.

Table 1 and Table 2 illustrate the initial values of the variables indicators for Growth and Corruption for the case studies (China and India) before analysing them.

Table 1: Growth and Corruption Raw Data- China

Year	2016	2017	2018	2019	2020
Growth Indicators					
GDP Growth Annual	6.849	6.947	6.750	5.951	2.240
FDI	1.556	1.349	1.694	1.311	1.723
Employment	66.915	66.653	66.430	66.015	64.837
Inflation	4.561	4.828	1.590	2.578	8.817
Savings	44.381	44.905	44.486	43.773	44.016
Corruption Indicators					
Corruption Perception Index	40	41	39	41	42
Control of Corruption	48.56	47.60	46.63	44.71	54.33
Voice and Accountability	7.39	7.88	9.18	6.76	4.83
Rule of Law	41.83	46.15	49.52	46.15	52.40
IEF	52.0	57.4	57.8	58.4	59.5



Table 2: Growth and Corruption Raw Data- India

Year	2016	2017	2018	2019	2020
Growth Indicators					
GDP Growth Annual	8.256	6.795	6.454	3.738	-6.596
FDI	1.937	1.507	1.558	1.787	2.413
Employment	46.522	45.981	45.423	45.603	41.332
Inflation	3.238	3.969	3.884	2.391	5.601
Savings	30.831	31.707	31.410	29.698	28.539
Corruption Indicators					
Corruption Perception Index	40	40	41	41	40
Control of Corruption	45.19	47.12	49.04	46.15	46.15
Voice and Accountability	61.58	58.62	57.97	56.04	53.14
Rule of Law	52.88	53.37	54.81	51.92	53.37
IEF	56.2	52.6	54.5	55.2	56.5

In this part, data will be analyzed by calculating the coefficient correlation and multiple regression for the main two variables (Growth and Corruption) with their different indicators they were mentioned earlier, then an interpretation for the result will be given in order to understand the possible impact of corruption on economic growth.

4.1 Coefficient Correlation

After extracting the raw data in from its various sources, the Coefficient Correlation between economic growth and corruption will be calculated in general, and between the individual indicators used in this dissertation for each variable of them. Correlation results has three possible interpretations: a positive value reflects a movement of the two variables to the same direction, a negative value reflects a movement of the two variables in different directions and a zero value reflects that there is no relation between the two variables.

Table 3: Coefficient Correlation Analysis- China

<i>Growth/Corruption</i>	<i>GDP Growth Annual</i>	<i>FDI</i>	<i>Employment</i>	<i>Inflation</i>	<i>Savings</i>	<i>Corruption Perception Index</i>	<i>Control of Corruption</i>	<i>Voice and Accountability</i>	<i>Rule of Law</i>	<i>IEF</i>
GDP Growth Annual	1									
FDI	-0.489	1								
Employment	0.967	-0.401	1							
Inflation	0.679	-0.250	0.605	1						
Savings	0.540	-0.048	0.604	0.850	1					


Corruption Perception Index	-0.725	-0.192	-0.699	-0.487	-0.357	1				
Control of Corruption	-0.831	0.656	-0.682	-0.467	-0.085	0.559	1			
Voice and Accountability	0.878	-0.128	0.808	0.809	0.607	-0.891	-0.710	1		
Rule of Law	-0.731	0.548	-0.822	-0.110	-0.224	0.328	0.530	-0.354	1	
IEF	-0.544	0.047	-0.722	0.016	-0.285	0.446	0.168	-0.300	0.857	1
Overall Correlation	-0.610									

For China, correlation analysis in table (3) showed that there was a relatively strong negative relationship between economic growth and corruption with a ratio of (-0.610) with their autocratic regime. This negative percentage present that whenever corruption score is decreasing or became worse, economic growth is increasing, and vice versa. A lower corruption score indicates a worse corruption level in the country. This shows that if the level of corruption increased or became worse, that will affect the economy of China to achieve higher levels of growth, if they did so.

With regard to the correlation coefficient for the individual indicators, the results showed that the GDP annual growth rate and employment rate had a relatively strong negative correlation with all individual indicators of corruption (Corruption Perception Index, Control of Corruption, Rule of Law and IEF) except Voice and Accountability, which indicate that those indicators- GDP annual growth rate and employment- are high likely to be affected by the examined corruption indicators whenever the score of these indicators goes down the level of corruption will decrease and GDP annual growth rate and employment will increase. And on the other hand, Voice and Accountability has a strong positive correlation with all of economic growth's indicators except FDI indicator, which implies that Voice and Accountability has an impact on growth in general as individual indicator in case it is increased as a score that means lower level of corruption in China, the economy will increase and vice versa.

Table 4: Coefficient Correlation Analysis- India

<i>Growth/Corruption</i>	<i>GDP Growth Annual</i>	<i>FDI</i>	<i>Employment</i>	<i>Inflation</i>	<i>Savings</i>	<i>Corruption Perception Index</i>	<i>Control of Corruption</i>	<i>Voice and Accountability</i>	<i>Rule of Law</i>	<i>IEF</i>
GDP Growth Annual	1									
FDI	-0.831	1								



Employment	0.981	-0.803	1							
Inflation	-0.720	0.564	-0.826	1						
Savings	0.888	-0.894	0.806	-0.372	1					
Corruption Perception Index	0.208	-0.421	0.238	-0.525	0.082	1				
Control of Corruption	0.184	-0.578	0.064	0.130	0.478	0.542	1			
Voice and Accountability	0.907	-0.554	0.869	-0.531	0.783	-0.135	-0.076	1		
Rule of Law	0.070	-0.248	-0.116	0.494	0.418	0.084	0.806	0.062	1	
IEF	-0.494	0.836	-0.465	0.172	-0.735	-0.092	-0.543	-0.239	-0.245	1
Overall Correlation	0.752									

For India, correlation analysis in table (4) showed that there was a relatively strong positive relationship between economic growth and corruption with a ratio of (0.752) with their democratic regime. This means that an upward movement in the corruption leads to a movement on the same direction for growth and vice versa. It should be noted and known that the increase of corruption score here reflects a decline of the level of it in the country, which means that the improvement in India's corruption score will lead to positive change in the growth in general.

With regard to the correlation coefficient for the individual indicators, the results showed that FDI had a relative negative correlation with all corruption indicators except IEF, which implies that the lower is the corruption score means higher level of corruption, which might lead to higher FDI inflow that will be encouraged to be part of Indian economy, and vice versa. And for corruption indicators, Voice and Accountability has a positive impact on GDP annual growth rate, employment and savings as economic growth indicators, if it -Voice and Accountability- increased, the level of corruption will decrease, thus these indicators will increase which will contribute in economic growth, and vice versa.

4.2 Indicators averages and comparison

The following table (5) shows the average values of growth and corruption indicators under autocratic and democratic regimes over five years between 2016 and 2020. The aim is to know the differences between the individual indicators of the main variables to compare them.

Table 4: Indicators' Average

Growth	China	India
GDP Growth Annual	5.747	3.729
FDI	1.527	1.841



Employment	66.170	44.972
Inflation	2.184	3.817
Savings	44.312	30.437
Corruption		
Corruption Perception Index	40.600	40.400
Control of Corruption	48.365	46.731
Voice and Accountability	7.209	57.469
Rule of Law	47.212	53.269
IEF	57.012	55.008

It is clear from the average data of indicators that there is a large variation in some individual indicators, whether for economic growth or corruption. The big difference in growth indicators is almost all in favor of China, which is normal if we know that the Chinese economy is the second most powerful economy in the world. While the variation in corruption is also significant in some indicators, the most important ones are: Control of Corruption, Voice and Accountability and Rule of Law. To know if there is a statistical relationship between these individual variables and the to which extent the indicators of the dependent variable Growth (GDP Growth Annual, Employment and Savings) are affected by the three indicators of Corruption (Control of Corruption, Voice and Accountability and Rule of Law) that show significant variation in the average, we will calculate the multiple regression coefficient analysis to determine if each dependent indicator is affected by these independent indicators.

4.3 Multiple Regression

In this part, linear multiple regression analysis will be performed which is used to examine the possible relationship between one dependent variable and several independent variables (two or more). The dependent variable here is growth, its main factors (GDP Growth Annual, FDI, Employment, Inflation and Savings) were measured with the factors of the independent variable corruption (CPI, Control of Corruption, Voice and Accountability and Rule of Law and IEF). Basically, each dependent growth factor will be examined separately with independent corruption factors to predict the possible effect of the independent factors on the outcome of the dependent variable. After conducting a multiple regression test between the previously explained variables for China and India, the results showed that there is no statistically significant relationship between growth and corruption with all their different factors with regard to the autocratic regime in China, which is approve the null hypothesis H0. But when it is about democratic regime in India, the results showed that there is a statistically significant relationship between some growth indicators and some corruption indicators, which rejects the null hypothesis H0. The indicators which showed the significant relationship can be shown as follow:

- Growth indicator (GDP Growth Annual) and Corruption indicators (Control of Corruption, Voice and Accountability and Rule of Law) in terms of democratic regime of India (Table 6).
- Growth indicator (Employment) and Corruption indicators (Control of Corruption, Voice and Accountability and Rule of Law) in terms of democratic regime of India (Table 7).

Table 6: Multiple Regression GDP Growth Annual and Corruption indicators- India

<i>Regression Statistics</i>					
Multiple R	0.999994659				
R Square	0.999989317				
Adjusted R Square	0.99995727				
Standard Error	0.039211725				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	3	143.9298459	47.9766152	31203.0983	0.004161477
Residual	1	0.001537559	0.00153755		



	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Intercept	-68.60589305	1.073822726	-63.889403	0.00996359
Control of Corruption	2.990473588	0.023253384	128.603799	0.00495014
Voice and Accountability	1.913003579	0.006421272	297.916619	0.00213689
Rule of Law	-3.329330091	0.032501518	-102.43614	0.00621459

We can notice from the previous table (6) that the value of the regression coefficient is equal to (0.004161477), which is less than $\alpha = 0.05$, which means that there is a statistically significant relationship between the GDP Growth Annual rate as a growth factor and the three corruption factors (Control of Corruption, Voice and Accountability and Rule of Law) with the indication of $\alpha = 0.05$ in the democratic regime of India.

We can understand from this result that the change in the level of annual economic growth of India is mainly associated with the change in the level of corruption. In the sense that increasing the fight against corruption and paying attention to its three factors (Control of Corruption, Voice and Accountability and Rule of Law) will lead to a decrease in the level of corruption, which will positively affect growth under the democratic system of government in India. Conversely, the lack of attention to the previous factors of corruption will lead to an increase in the level of corruption and thus its negative impact on growth.

Table 5: Multiple Regression Employment and Corruption indicators- India

<i>Regression Statistics</i>						
Multiple R	0.999977507					
R Square	0.999955015					
Adjusted R Square	0.99982006					
Standard Error	0.027874163					
ANOVA		<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression		3	17.27096	5.756986	7409.544	0.00854
Residual		1	0.000777	0.000777		
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>		
Intercept	41.65225095	0.763341	54.56573	0.011666		
Control of Corruption	1.146923966	0.01653	69.38452	0.009175		
Voice and Accountability	0.65114556	0.004565	142.6498	0.004463		
Rule of Law	-1.646308894	0.023104	-71.2561	0.008934		

The previous table (7) shows that the total value of the multiple regression is equal to (0.00854), which is less than $\alpha = 0.05$, which means that there is a statistically significant relationship between the Employment rate as a growth factor and the three corruption factors (Control of Corruption, Voice and Accountability and Rule of Law) with the indication of $\alpha = 0.05$ in the democratic regime of India.

This can be explained by the fact that the employment rate is negatively affected by the high level of corruption in India, meaning that the employment rate could be much better if the government strengthened campaigns against corruption, specifically the three factors of it factors (Control of Corruption, Voice and Accountability and Rule of Law). This can be explained by the fact that the employment rate is negatively affected by the high level of corruption in India, meaning that the employment rate could be much better if the government strengthened campaigns against corruption, specifically the three factors of it. On the contrary, failure to take into account these

factors will lead to greater corruption in the recruitment process and the placement of the right people in the appropriate jobs for them and their different qualifications, which will affect the decision-making processes, especially if they are issued by unqualified employees in the decision-making positions. Accordingly, these decisions will negatively affect economic growth, especially if these jobs are linked to sensitive sites that directly affect the areas of the economy.

CONCLUSION


The global is changing rapidly which is a fact no one can deny, but it might be hard to change something that has become like a culture to people. It seems that corruption is one of those things which is apparently unchangeable in China or India. Despite all anti-corruption campaigns launched by the two countries, but the outcome is still ongoing like before. China does not seem uncomfortable with its level of corruption as the data had shown, corruption has no proved relation in slowing the Chinese economy down. As for India, the annual growth and employment rate are the most suffering economic indicators in India, which implies that wasted opportunities that they missed because of their high level of corruption which could have achieved a higher welfare for its people and decreased the poverty level. The Indian government still have the ability to fight that situation for the good of its country, but first they should change the mentality about it.

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