

The Role of Financial Corruption on Economic Espionage in Iran

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ABSTRACT

Corruption is a complex and multidimensional phenomenon with multiple causes and effects. Corruption ranges from the simple act of illegally paying a government employee to the widespread dysfunction of a political or economic system. Financial corruption is an issue that often stems from the interaction of government and the market economy; Especially if the government itself inevitably plays an endogenous role. Financial corruption can be considered both as a structural political or economic problem, and as an individual moral or educational problem. The level and extent of corruption in the country will negatively affect the development process by investing in economic fields. Bribery, rent-seeking, embezzlement, and the like are some of the issues affecting many developing countries, especially those in the early stages of development. While increasing the legitimacy and acceptability of the political system of these countries, fighting such corruption increases the transparency of the country's economic environment besides enhancing legitimacy and acceptability of the political system of these countries and increases its sense of economic security among investors. This article first defines financial corruption and economic espionage from different perspectives and finally presents a conceptual model.

Keywords: financial corruption, economic espionage, industrial espionage, financial information

Introduction

Corruption is the attempt to gain wealth and power through illegal means, private gain at the expense of public interest, or the abuse of state power for personal gains. It is also an antisocial behavior that provides unwarranted benefits contrary to moral and legal norms and weakens the power to improve people's living conditions. The effects of corruption can be seen in economic growth, investment, underground economy, government revenue, social spendings, economic development, foreign aids, political system, crime rates, and inflation. The most general and simple definition of corruption is the abuse of state power for private gains. This definition implies that corruption should not be present in the activities of private sector. But, in large private organizations, this phenomenon is clearly and abundantly present. Abuse may not be merely for personal gains. It can be committed for the benefits of a group, class, friends, family, and etc as well. Extortion, misappropriation, fraud, bribery and embezzlement, concealment, violation of norms (violation or deviation from legal norms or blackmailing, and exchange are among the types of corruption. Factors

affecting financial corruption vary depending on the environmental conditions and policies, administrative ratios, political development, and social history of each country. Financial corruption will spread if regulatory agencies are weak and government policies create economic rent. Some features of developing countries make it extremely difficult to control financial corruption. The natural motivation of employees to work productively in public sector is undermined by many factors, such as low levels of payments, benefits, encouragement, and promotion of individuals regardless of their performance. Improper allocation of government budgets, insufficient supplies and equipment, delays in budget allocations, and lack of organizational purpose also frustrate employees if high-ranking officials and political leaders use government offices for their own personal benefits; or when resisting against financial corruption, they are not secure, the motivation to live an honorable life will be further weakened. (Jafarieh and Taherpour, 2015). Although the theoretical discussions about corruption were seriously discussed in the 1950s, since the 1970s, the first theoretical work and empirical studies on corruption and its causes were presented; since then, the category of corruption as one of the main issues in the field of government, governance and development have been debated. Their results showed that the phenomenon of corruption is the most prevalent barrier to poor developing countries. Also, according to the results of these studies, if necessary measures to combat corruption are not taken in these countries, the grounds for its occurrence will be strengthened and the prevalence of this social problem will lead to the failure of economic development policies. This echoes the need for extensive studies and research on corruption in Iran. Because, the country is currently in the process of development and most of development plans are focused on executing economic development policies (Sadeghi et al., 2010).

Importance and necessity of research

Corruption has proven to be a contagious and deadly disease. In addition to disintegrating the organization from within, it spreads from one organization to another and from one institution to another to the extent that it degrades all existing institutions. Then, this notion is strengthened in the people's minds that government officials and economic elites are squandering financial resources and abuse them (Fathabadi, 2014). This negative attitude towards government can lead to political crises with serious security consequences. According to the available statistics, the ranking of transparency in Iran is lower than the average of the international community; also, according to International Organization of Transparency, these results indicate an increase in corruption despite the existence of regulatory bodies and the implementation of various laws. For example, according to the report of International Organization of Transparency in 2004, 2005, 2006 and 2007, the total score of corruption in Iran was 2.9, 2.9, 2.7 and 2.5 out of 10, respectively; so, it has obtained the rankings of 88, 93, 106 and 131 among 155, 159, 163 and 180 studied countries (Shahbodaghi et al., 1400).

Meanwhile, in 2009, the corruption score in Iran reached 1.8. This indicates that from a global perspective, the prevalence of corruption in Iran has been increasing. This issue has turned into a major concern for senior executives at the highest levels of government, including three main departments of government as well as the Supreme Leader of Iran. This has led to direct orders from the Supreme Leader on rooting out and combating financial and administrative corruption. For example, on April 3rd of 2001, the Supreme Leader obliged the heads of the three departments and their subordinate supervisory bodies in an 8-article decree to seriously and decisively fight against economic and financial corruption. In April 2010, by announcing the general policies of the administrative system, the Supreme Leader also reemphasized it. These emphases and concerns have led to the development of various laws and regulations in the field of combating corruption and monitoring the performance of government agencies in order to fight financial and economic corruption more seriously, among which bills for combating money laundry, fighting against smuggling of goods and foreign currency, trade liberalization, exchange rate unification, reform of the direct tax law, transparency of financial reforms, and the establishment of an anti-economic corruption headquarter can be mentioned. However, despite the above set of activities and laws and regulations that show the attention of the three departments from a legal point of view on this issue, the evidence indicates the occurrence of other types of financial and administrative corruption in government organizations due to the lack of attention to effective management and organizational factors in the occurrence of corruption.

Problem statement

The level and extent of corruption in developing countries will be negatively affected by investments in economic fields. Bribery, economic rent, embezzlement, and the like are some of the issues on the way of many developing countries, especially those in the early stages of development. For example, based on research over a 24-year period, the Chinese Center for International Studies and Research found that between 1987 and 1990, the number of major investors investing in China reached 110 companies; but, that number dropped to 79 investors in 1990-1992. The reason for this was the severe corruption in the country's tax system, which encouraged investors to flee the country. Fighting such corruption, besides increasing the legitimacy and acceptability of the political system of these countries, increases the transparency of the country's economic environment and improves the sense of economic security among investors. Intelligence agencies can play a major role in shaping such an environment, especially in developing countries. Due to the lack of strong and capable regulatory agencies or their youth, intelligence and security agencies can turn into the factors for the optimal direction of the development process in these countries if they become properly managed. On the other hand, due to the complexity and network of economic threats in today's world, such as international corruption and gangs of money laundry, currency smuggling, drugs traffic, and the like, other regulatory agencies such as the police or the judiciary sections have the ability to identify these threats. Therefore, recognizing and dealing with these threats also require intervention of intelligence agencies of the countries.

Identifying these threats requires special expertise and facilities that are only available to intelligence agencies. Therefore, these organizations should use their facilities to monitor and prevent the occurrence of these phenomena. An example of such operations was the arrest of Shahram Jazayeri, one of Iran's economic corruptors in recent years by Iranian Intelligence Agency. Other concrete examples of monitoring functions for intelligence services include the fight of Intelligence Ministry against pyramid companies. In a world dominated by technology, access to trade secrets is an invaluable factor in success, and intelligence services are reliable tools for this purpose. The person who was once the architect of US sanctions against Iran, is now in charge of economic intelligence at the CIA. Today, David Cohen is in charge of overseeing Iran's economy. In the United States, three members of the information agencies, including CIA, the Office of Information and Analysis of Treasury, and Office of Information and Research of Foreign Ministry are analysts and distributors of economic information. This means that the future battlefield between Iran and the United States is "economic espionage." The use of espionage weapon has been one of the most important tools of the West against the Islamic Republic of Iran, so that in different historical periods, attempts to extract sensitive information, especially in the military field, have been among the main agendas of the West. Economic espionage was the beginning of a new era of Western activity against Iran, which, incidentally, continues unabated even after Barjam (JCPOA). [9]. If the development work done is defined in a unit of time, a society will develop whose rate of progress changes over a defined period of time.

Another function of intelligence agencies is economic espionage, which is to the benefit of many countries. Intelligence agencies are able to increase the knowledge and experience gained in a unit of time through economic and practical espionage, leading to the faster development of the country. They are also able to identify markets for domestic products (Moradi, 2019).

Definition of financial-administrative corruption

The definition of corruption has been the subject of much debate over the years, both in scientific circles and in international forums. There are several definitions of the concept of financial-administrative corruption, each of which has its strengths and weaknesses. What most of these definitions have in common is that in a corrupt office environment, the client's rights are trampled on or unjustly transferred to another. From these definitions, it is inferred that, firstly, financial-administrative corruption is a relative matter and is related to the value system of any society. Because, while an individual in a particular functional society is considered corrupt, it may be considered normal in another society. Second, administrative-financial corruption is more prevalent in the government apparatus and in the public sector.

In general, most definitions of financial-administrative corruption refer to some aspects of corruption and there is a lack of a comprehensive and appropriate definition in the literature of corruption (Shahbodaghi et al., 1400). However, by combining the strengths of the above definitions, the following definition of corruption can be reached:

Financial-administrative corruption involves three groups of actions related to government activities:

1- Unethical actions of individuals to obtain the cooperation of a person working in the government by violating, changing, or misinterpreting laws and regulations and administrative rules for personal or professional gains in exchange for payment of valuable money, goods or services.

2-Immoral acts of persons trying to attract someone working in the government by paying money, offering valuable goods, or services to violate, change, or interpret administrative rules and regulations for self-interest or trade union's benefit.

3- Immoral acts by government officials to obtain valuable money, goods or services from individuals by violating, altering, interpreting, or misinterpreting administrative rules and regulations for the benefit of a person, trade union or ethnicity and advocating or defending oneself or others.

4- Exercising influence, discrimination, recommendation or refusal, delayed work or job quit of a government official while doing his legal duties in office hours in order to receive money, goods or services (Shahbodaghi et al., 1400).

Theoretical views and approaches to corruption

There are several theoretical views and approaches to corruption at the macro level that are sometimes in conflict with each other. For example, the conflict between classical and positivist approaches to corruption seems very significant. In a way that most of the theories are located in either this or that view. In the classical school, punishment is fair. Because, in this view, the offender has the power of reason and free will. In the neoclassical school, punishment can be justified only if the crime is the result of a rational behavior. The revision of the neoclassical school necessitated the presence of non-legal professionals, including psychoanalysts, psychologists, and social workers in the realm of criminal justice. On the other hand, positivists, instead of the classical emphasis on the rationality of corrupt behavior, saw it as a sign of some kind of biological or social pathology, and considered the culprit as a patient rather than a villain. Even in contemporary positivism, criminologists consider corruption to be highly "relative or definable" and believe that subjective factors, as opposed to material factors, affect the dimensions of corruption and that knowledge enables them to identify corruption and corrupters. On the other hand, according to thinkers, several factors affect the occurrence of administrative-financial corruption at the level of organizations, including the followings (Greiger, 2014):

1. Individual characteristics such as age, gender, nationality, race, skills, education level, social background and position.

2. Characteristics of organizational system such as strategy, leadership style, organizational culture, compensation systems, personnel development and job horizons.

3. Environment at the macro level, such as political, social, economic and cultural factors of the country

In theoretical discussion, all of these factors may be summarized in three main groups, including personnel, organizational, and environmental factors. In short, most organizational-level theories about administrative-financial corruption revolve around these three factors. In order to achieve an appropriate attitude in the field of factors affecting the incidence of administrative-financial corruption, several views, models, and theories have been proposed and each has tried to explain the causes of administrative-financial corruption and how a corrupt person behaves and the processes of corruption. In order to achieve the conceptual model of research, a number of these views, theories, and models are discussed as follows.

The view of ethicists

In this view, anti-administrative-financial corruption strategies are always vulnerable to group and factional expediencies and will not be effective. Although the attitude of ethicists is acceptable in tribal systems, it has its limitations. In this view, phenomena are considered only from two dimensions: The things that are good and the things that are bad. However, in an organization where top managers do not have much public

legitimacy, it will be very difficult to define generally accepted norms. In general, the view of ethicists is not a strong view in this regard because it does not take into account social conditions and does not examine the gap between formal norms and informal norms governing in the society (Shahbodaghi et al., 1400). In support of this claim, it must be acknowledged that there are different interpretations of what is moral behavior and what is not. In this regard, Boroumand (2003) has proposed a model of moral behavior consisting of four perspectives: a) the view of profitability, b) the view of individualism, c) the view of moral law and d) the view of justice.

The view of functionalists

The view of functionalists has been debated from various dimensions. In particular, in this view, one can not consider hateful, destructive, illegal, and harmful views of administrative-financial corruption and a certain level of corruption can be considered useful for organizations and society. On the other hand, it is not clear in this view that what level of corruption can be beneficial. If the desired level is exceeded, will it be controllable or not? How to measure the amount of useful corruption in the organization and society is not clear in this view? So, despite the numerous conceptualizations that have been done in detail in this view, it cannot be helpful in understanding the factors affecting corruption. Because, it emphasizes the results more than the roots of developing administrative-financial corruption. Therefore, in general, it cannot be considered as a strong view on administrative-financial corruption.

Explaining the concept of corruption and its definitions and dimensions from the perspective of researchers

Corruption is one of the global phenomena that has existed for a long time with the emergence of the basic forms of government and in modern times, it exists in almost all countries across the world. Globally, corruption is considered a serious problem in developing damages to the public policies and interests. In the subset of corruption in the general sense, corruption in the administrative system also affects all countries and many measures have been taken to prevent or combat it. However, despite a long history in this field, the causes of administrative-financial corruption and strategies to prevent or combat it have not been systematized. Although many interdisciplinary studies have been conducted on the causes and solutions, until the 1980s, studies on administrative-financial corruption were limited to the fields of economics, sociology, social psychology, criminology, political science, and ethics, each with its own angles looking at the issue (Turgler (2006), Amundsen (1999), Endowing and Jaldstad ,2001; Brunner,1981 Williams, 2000). For example, with the increase of studies since the 1990s, different approaches to the definition of administrative-financial corruption were developed and it was found that there is no unified and global concept regarding the definition and factors affecting the occurrence of administrative-financial corruption (Shahbodaghi et al., 1400). The highlight of these studies was the achievement of some common dimensions in the definition of administrative-financial corruption and identifying the factors affecting its occurrence, some of which were as follows:

Violation of norms: In this dimension, administrative-financial corruption is an immoral behavior (Brasz, 1970; Van Duyne,2001) which includes violation, falsification or deviation from legal norms (Khan,1996; Nye, 1967) or moral values (Brastz, 1970).

Abuse of power: *In this dimension, those who do corrupt deeds use the power, authority, position, or knowledge entrusted to them for their own personal benefits or those of certain individuals (Ashforth and Anand,2003; Khan,1996; Nye,1967; Pitt and Abratt,1986; Tanzi and Treisman,1995 and 1998; Van Duyne,2001).*

Confidentiality: In this dimension, the perpetrators of corrupt acts commit corrupt acts without the knowledge of a specific person such as stealing from inventory, documentation, and etc., or form a secret, intimate and close community that secretly agree upon illegal goals and profits resulting from their exchanges (Huntington, 2019).

Combining the common dimensions of administrative-financial corruption, Robel and Coleman (2018) provide the following definition: “Financial-administrative corruption is a deviant behavior that manifests itself in the abuse of duties in the system of organization and society for the benefit of another person, institution, or company. This abuse of duty is initiated by the individual or someone else to the benefit of

themselves or a third party. As a result, damage is done to the system of the organization and society, and it is expected that corrupted practices become protected in a secret and bilateral agreement” (Robel and Coleman, 2018).

Numerous approaches and theories and differences of opinions among thinkers

According to the views of various researchers, including Tanzi (2002), the views of experts on the theoretical foundations of financial-administrative corruption are not the same, and there are several theoretical views and approaches to it (Tsegaye, 2013), as follows:

- A) Different views (such as the view of ethicists, the view of functionalists)
- B) Theories about financial-administrative corruption- such as the theory of rational choice, the theory of opportunity to commit corruption, the theory of deterrence, the theory of relative deprivation, the theory of rent-seeking, the theory of supporter-follower)
- C) Various theories about financial-administrative corruption (such as the normal theory and institutionalization of corruption, the theory of structural duality)
- D) Different models (such as the model of cognitive and voluntary aspects of a corrupt person in committing corrupt action.

As mentioned above, one of the reasons for this multiplicity is the multidimensional view of the issue of financial-administrative corruption in terms of economic, social, cultural, political, legal, managerial and psychological issues by each of the theorists.

Historical analysis of financial-administrative corruption

Numerous articles in this field have been written before Christ. About 2000 years ago in the Kingdom of India, for example, the Prime Minister of the time, Kautilia, wrote a book titled “Arthashastra” in which he discussed financial-administrative corruption in the state system and mentioned the root causes of financial-administrative corruption among government employees. He likened the government to a large jar of honey that everyone is willing to use in some ways. In this book, forty ways of embezzlement were also enumerated (Bardan, 2017).

The study of the history of ancient civilizations, such as Iran, Greece, Rome, China, Egypt, and India shows the fact that corruption in human societies is as old as human civilization and is still one of the common problems in the world. Corruption has caused many problems for human societies, like successive wars, violence and uprisings against ruling civilizations, destruction of organizations, and disintegration of societies. An important and warning point that is extracted from the history of nations and has been repeatedly stated in the analysis of historical events is that "corruption of the governing body" has been one of the main causes of the fall of governments, the decline of civilizations, and the spread of financial-administrative corruption. Then, there has been a direct relationship between the "fall of governments and civilizations" and "administrative-financial corruption" (Shahbodaghi et al., 1400).

Consequences of financial-administrative corruption

The importance of studying the factors affecting financial-administrative corruption through the realization of the harms and consequences of this phenomenon becomes more apparent. In many developing countries, the general public, NGOs, and the media view corruption as the only major factor of being under others' dominance and poor economic growth (Yadav, 2005). Frisch (1994) and Pillay (2004) believed that financial-administrative corruption was one of the main obstacles to development. Some studies have concluded that financial-administrative corruption affects lower levels of private investment (Wei, 2000; Mauro, 1995) and significantly reduces foreign and direct investment (Zhao et al., 2003). This trend leads to financial crises (Wei and Wu, 2001) and the allocation of ancillary resources (ADS and De Tala, 1999), spending distortion and government yield (Tanzi and Davoodi, 1997), high unequal income and poverty (Gupta et al., 1998), inflation (Al – Marhubi, 2000) and lower living standards (Faria, 2001). Empirical research also shows that high levels of corruption reduce social success (Mauro, 2018), reduce the level of human capital, and destroy self-confidence (Husted, 2019). These consequences and negative effects of corruption emphasize the need for extensive research on administrative-financial corruption, which is the

source of corruption in society. In this regard, in order to emphasize the sensitivity of the issue, some consequences of administrative-financial corruption are mentioned:

1. From an individual point of view, administrative-financial corruption has destructive effects; these consequences include the occurrence of mental and psychological disorders, the emergence of family disputes, damages to the credibility and prestige of the individual, and the lack of proper guidance of individual talents.

2. From the organizational point of view, administrative-financial corruption reduces the productivity of the organization and instead of spending time and energy to achieve the goals, they dedicate themselves to creating a gap in the system. At the same time, the process of human resource development is damaged and moral virtues are diminished and negative values are created in the organization. On the other hand, administrative costs for consumers have increased due to the addition of corruption costs to normal administrative costs, while infecting healthy employees and creating a climate of discouragement and distrust in them and question the integrity and trustworthiness of their services besides lowering the quality of public services (Liu, 2015).

3 From a social point of view, administrative-financial corruption hinders the growth of healthy competition and retards efforts to reduce poverty and injustice. At the same time, administrative-financial corruption weakens the belief of nations in their ability and by spreading it from elite groups to the lower classes of society, it causes despair and frustration for the foreseeable future.

4. From economic view, administrative-financial corruption leads to increasing prices, rising illegitimate incomes, and unreasonable justification of economic backwardness, directing investment to unproductive and non-functional path. All of these hinder economic growth or slow down economic growth and development (Kaufman, 2017).

5. From a cultural point of view, administrative-financial corruption causes a decrease in people's trust and loyalty to organizations, spread of laziness and inadequacy, and weakening of moral beliefs and values of society (Lipset and Lenz, 2000).

6. From a political point of view, administrative-financial corruption reduces the legitimacy and effectiveness of governments, endangers the stability and security of societies, and undermines the values of democracy and ethics. In other words, it destroys good governance and democracy and reduces respect for the constitution, thereby hindering the political development of society.

As it can be seen from some examples of the consequences of administrative-financial corruption, the variety of consequences and effects of corruption and their development has given administrative-financial corruption a complex nature. In spite of the efforts of governments to prevent or combat it, many reform and countermeasures of governments have failed. Therefore, it is necessary to pay attention to this issue with sufficient knowledge and understanding of the dimensions and factors affecting corruption in organizations and to conduct scope studies in this regard (Shahbodaghi et al., 1400).

Research background

Kashefi et al. (2016) investigated the importance of the components affecting corruption despite the model uncertainty and endogenousness of explanatory variables. For this purpose, Bayesian averaging technique with instrumental variable was used to identify the main factors affecting corruption during the period of 1991-2010. For 123 countries, out of 36 explanatory variables, the rule of law variable with a posterior probability of 1 and a posterior coefficient of 0.662 and the efficiency of government with a posterior probability of 0.964 and the posterior coefficient of 0.358 are in the first and second significance ranks. The Asian virtual variable with a posterior probability of 0.965 and a posterior coefficient of -0.194 indicate that financial corruption in Asia is a serious problem. Focusing on 95 developing countries, the rule of law variable with a posterior probability of 0.999 and a posterior coefficient of 0.684 was the most important variable to limit financial corruption. Based on the results, it is proposed to strengthen the rule of law, improve the efficiency of government institutions, and expand international cooperation.

Zahed et al. (2017) discussed the effect of financial corruption on the economic growth of conflicting attitudes. Some scholars of humanities have considered financial corruption to be a desirable phenomenon and have called it the wheel oil of the economy, believing that financial corruption improves weak economic

institutions and thereby increases the rate of economic growth. Some others have emphasized the undesirable nature of financial corruption, calling it the “sandbox of the economy wheel”, arguing that financial corruption erodes economic growth by slowing down and making administrative process costly and inefficient and shifting scarce resources to unproductive activities. With the approach of talent allocation and using the econometric method of the equation system, this article has studied the effect of financial corruption on the growth of Iran's economy from 1984 to 2014, coming to the conclusion that due to deviation in talent allocation, financial corruption has slowed down the growth of the Iranian economy in those years. Armen et al. (2015) evaluated the concurrent effect of financial corruption and economic freedom on foreign direct investment in selected developing countries using the generalized torque method during the period of 2000-2016. Results showed that financial corruption has a significant and inverse effect; while, economic freedom has a positive and significant effect on foreign direct investment in developing countries. On the other hand, the positive and significant effect of variables such as the level of economic infrastructure, political stability and rate of return on investment in developing countries was confirmed.

Tran et al. (2020) examined the impact of financial development on the relationship between financial corruption and corporate growth. Results showed that there is a significant relationship between financial corruption and corporate growth. Financial development also affected the relationship between financial corruption and corporate growth.

Cezlik and Guzek (2018) examined the impact of financial corruption on the relationship between foreign investment and economic growth. Their results showed that foreign investment in companies leads to increased economic growth and with the increase of financial corruption, foreign investment, and consequently economic growth decrease.

Data et al. (2017) examined the impact of financial corruption on the relationship between human capital and foreign direct investment. The results of their research showed that there is a significant correlation between human capital and foreign direct investment. Financial corruption also affects the relationship between human capital and foreign direct investment. Moradi (1398) investigated the role of voluntary disclosure of financial information in industrial espionage of companies. He concluded that various theories affect the disclosure of financial information, including agency theory, signaling theory, capital need theory, legitimacy theory, and political cost theory. If companies disclose less information, according to signaling theory, it is considered as bad news and has a negative effect on stock prices, and if, according to the theory of legitimacy, they voluntarily provide more information, according to the phenomenon of industrial espionage, various companies and their competitors use this information disclosure for its own purposes. Finally, a conceptual model was presented in that study.

Economic (industrial) espionage

Economic espionage is defined as “the collection of economic information by one country about other countries”. Simply put, economic espionage is a common form of aggression by employees against their employers, competing private companies, and governments seeking to protect or develop their national economy. Economic data may include information such as GDP and inflation figures that may be obtained from published sources, or include more confidential information such as defense budget allocations and national R&D expenditures, usually obtained through illegal means. A different and relatively more accurate definition of this belongs to the Canadian Security Intelligence Agency (CSIS). According to the definition of this organization, economic espionage is an illegal, covert, coercive, or deceptive act in which a foreign government interferes or assists in obtaining unauthorized access to economic information, such as proprietary information or technology intended for economic gains. There is yet another, more complex definition in US counterintelligence law. This law is one of the few laws enacted to help prevent economic espionage. Economic espionage requires the illegal collection and use of data with economic importance, although technological advances may occasionally blur the distinction between economic and military objectives (Carl Sabino 2017).

Industrial espionage is defined according to the Oxford English Dictionary and means espionage to uncover the secrets of a rival industrial company, manufacturer and etc. Economic espionage serves economic

interests and focuses on the acquisition of product-related know-how. Unlike the illegal information methodology of curved information, the collection and evaluation of publicly available information through so-called competitive intelligence is legal within the scope of the Data Protection Act. Industrial espionage originates from various backgrounds such as industry of technical operations management, computer industry, security industry, law, and history. It is commonly used to describe industrial espionage, which includes corporate espionage, economic intelligence, or data theft, and is more commonly used to describe economic espionage, such as economic warfare or digital sovereignty. (Carl Sabino 2017).

Economic espionage and theft of trade secrets

Economic espionage and theft of trade secrets are considered among employee crimes. The term employee crime and white-collar crime was coined in 1939 during a speech by Edwin Sutherland at the American Sociological Association. He defined the term as "A crime committed by a reputable person with a high social status in the course of his work". Although there has been some debate about what constitutes embezzlement, the term today generally refers to a type of nonviolent crime that usually occurs in business situations for financial gains. Many employees' misconducts can hardly be prosecuted. Because, the perpetrators are experienced people who hide their activities through a series of complex transactions. According to the FBI, employee misconduct is estimated to cost the United States more than \$ 300 billion. Of course, the protection of trade secrets seems to be more important and serious in order to compete in the industrial world. At the same time, the world has undergone a computer revolution. At least, since the early 1990s, the power of information technology has grown exponentially, leading to the development of more powerful tools for stealing and transmitting protected information. This technological revolution in open societies is a major problem for a particular type of economic espionage activity, especially in the computer age; but, it is in the social science literature, including sociology and criminology. (Carl Sabino 2017)

Economic information

An important concept in connection with economic espionage is economic information. According to the Canadian Security Intelligence Agency, economic information is business policy or economic news that includes technological information, financial information, proprietary business information, and government information whose obtainment directly or indirectly contributes to the relative productivity or better competitive position of the economy of the country which is collecting information. Those who do economic espionage specifically target this type of information. In Japan, the Ministry of Industry and International Trade identifies foreign high-tech companies that are likely to produce important products in the near future. The ministry provides vital information to Japanese companies and leads them to buying foreign companies through cover companies, recruitment operations with fake identities, or in obvious ways. In another case, a company in the United States lost a tender for the construction of international electronic devices. The company later learned that a European intelligence agency had somehow overheard its pricing information. That European organization provided this important information to another company, which eventually won the tender (Carl Sabino 2017). Since the end of the Cold War, the form of foreign economic espionage has increased dramatically. According to a 1994 report represented to Congress on "foreign achievement of American companies with sensitive technology and espionage activities against them, it was announced that one of the allies' spy agency has had one spy operation by which paid a US government employee to obtain classified US military intelligence documents. It turned out that the citizens of that country in the United States were stealing an important American technology that was used in the production of cannon tubes. Industrial espionage, economic espionage or corporate espionage is a type of espionage that is carried out for commercial purposes rather than purely national security purposes. Economic espionage is or is carried out by governments and its scope is international; while, corporate or industrial espionage is more national and occurs between companies and super companies (Carl Sabino 2017).

In 1993, Apple's car manufacturer, German branch of General Motors accused the company of industrial espionage following the transfer of Apple manufacture executive and seven others to Volkswagen. Volkswagen subsequently threatened to sue over the slander, which led to a four-year legal dispute. The

case, which was finally settled in 1997, led to one of the largest settlement payments in the history of industrial espionage, with Volkswagen agreeing to pay General Motors \$ 100 million and buy at least \$ 1 billion from the company over seven years, albeit the manager explicitly did not apologize for the behavior of that executive (Carl Sabino 2017).

Another development that can be seen in cyber industrial espionage compared to traditional industrial espionage is the number of actors alongside government actors. In fact, in traditional industrial espionage, the role of governments is usually prominent. Accordingly, in the industrial espionage and their espionage, they take action to obtain industrial and economic information and knowledge, or they actually support the actions of companies and industrial centers active in this field. There were widespread restrictions and considerations on industrial espionage in the traditional sense, leaving only governments with the ability, experience, and knowledge to enter it. However, in the field of industrial cyber espionage, there is practically room for other actors to enter. For example, according to available information, many Chinese companies have practically created a sector for industrial espionage from the West instead of "investing in research and development", which is mainly done by using cyberspace. In this regard, even mafia companies have been formed, which engage in cyber espionage and sell the stolen information to various companies (Sedigh, 2016).

Information institutions and economic policy

By definition, intelligence agencies are organizations whose primary function is to generate information in the sense of a specific type of knowledge and awareness for decision makers to use. Therefore, influencing policy-making is one of the ontological features of them. Intelligence services have three main roles in the policy-making process, including cognitive, regulatory, and executive roles.

Cognitive role means producing the knowledge and awareness needed by decision makers in the policy-making process. The supervisory role seeks to monitor the policy-making process and its implications for the proper conduct of affairs by the agents involved in policy-making and to review policy feedback and inform policy makers about it. The executive role is also related to the direct presence of intelligence services in the implementation of a particular decision.

Development as a process requires policy-making. Just as the concept of development is complex and ambiguous, economic management and planning are also very complex and will therefore require precise development policy in development area. Economic planning or development management are the terms used in the development literature instead of development policy-making. Economic planning refers to the process by which decisions are made consciously and deliberately in order to achieve specific economic goals. As the definition implies, decision-making is at the heart of the government's economic policy-making process. Development management also means how to design, implement and evaluate development projects. Given that development management is in fact the same as development policy, it can be expected that the three roles of information in national policy-making become effective in development management and economic planning (Sedigh, 2016).

International developments have also put economic issues on the agenda of the intelligence services. For much of the second half of the last century, the focus of all countries' policies has been on military and political issues. However, military and political issues are not the only priorities of countries in the new century. It can be said that from the last decade of the twentieth century onwards, military power has played a less and less role in strengthening, maintaining and expanding the security of countries, and it can be argued that in the foreseeable future, countries will compete over economic issues rather than military issues (Mir Mohammadi , 2012).

Economic information: Factor of competition and reduction of research and development costs

According to Schumpeter, economic information is what economists do in intelligence organizations. This definition does not include the efforts of individuals and private organizations to obtain confidential and specific information relating to the technology, business communications, pricing and economic plans of their customers and competitors. In addition, such a definition does not even include the assessments of individuals or private companies and even government departments outside the community with

information about the current and future state of the economy. So, this definition seems relatively reductionist. In addition to this incomplete understanding of economic information, we are faced with two terms of "economic espionage" and "industrial espionage", which are always used instead of economic information and its equivalents. According to the information literature, for economic espionage, private companies steal each other's economic news. As two examples in industrial espionage, a South Korean company eavesdrops on Intel communications. If the Korean government provides equipment and wiretapping support to the company or owner of the company is Korean, the company's activities are called economic espionage (Sedigh, 2016). However, economic information seems to be a more comprehensive concept than economic or industrial espionage, and recent concepts should be considered parts of the broader term "economic information". At the same time, information should be considered the product of economic and industrial espionage. In fact, economic espionage operations lead to the production of economic information. Economic information is the product of the collection of economic data by one government about another government. Economic or industrial espionage (as an act that produces economic information) is stealing exclusive news or trade secrets. Exclusive news refers to the news related to resources, activities, research and development, trade and economic policies and sensitive technologies at the disposal and ownership of any governmental or non-governmental economic player. Although this news may be unclassified, its loss can reduce the economic player's ability to compete in the global market and have adverse effects on its existence. Economic data includes news such as GDP and inflation rate curves that can be accessed from published sources, or more confidential news such as budgets allocated to defense and national research activities and development spending. In technology espionage, each government collects data on other technology development programs that are commonly recognized as sensitive industries, such as electronics, aerospace, defense, or biotechnology (Mir Mohammadi, 2012).

According to the Canadian Intelligence Service, economic information is: "Economic or trade policy news, including technological, financial, business, and government data that is directly or indirectly accessible to foreign actors, leading to their relative superiority in economic competition." Although this definition is relatively more comprehensive than previous definitions, it still does not address domestic economic data and the measures taken to protect them or to identify corruption and malfunctions of the domestic economy. Therefore, the authors define economic information in terms of domestic considerations as follows: "Economic or trade policy news, including technological, financial, commercial, and government data accessed by foreign actors directly or indirectly leads to their relative superiority in economic competition or a threat to national security. Also, those data related to technological, monetary, financial, and commercial functions and anomalies of private and domestic government that are collected, analyzed and distributed by the intelligence service or other institutions producing economic knowledge and affect the country's economic security and economic competitiveness". Thus, it can be said that economic information is one of the special types of cognitive products of intelligence services that is the result of collecting economic data from competitors and monitoring the domestic economy (Mir Mohammadi, 2002).

Economic information: A factor to increase the strength of national competition

Despite the type and manner of governing, governments are under increasing pressure to meet the growing needs of the people and to ensure the stability and economic growth of their communities. Population growth in different parts of the world has increased the need for decent jobs to pay for food, clothing and housing. Also, as societies get closer to the concept of a global village and people have comprehensive connections with each other, including the elite educated in the best universities in the world, the expectation of a more prosperous life has increased. In a global market, where competition is intensifying day by day, the competitiveness of domestic industries often means the creation of wealth, prosperity, and security in the face of poverty and instability. For all countries, optimal and fruitful investment in desirable industries and in the right time is an important part of governments' national economic policies; because of this, economic information provided by competing nations is an essential element in making the right investment decisions. (William, 2014)

Economic espionage: Cheap research and development

One of the purposes of collecting economic information is to study and compare the position of national industries in comparison with other countries. Many countries are aware that sustainability and success in global economic competition require national and technological investments in national industries. Such awareness often leads to the decisions at the heart of which is economic espionage. Countries that are able to provide large budgets for the advancement and development of their industries continuously reproduce technological innovations in their industries by allocating research and development budgets; on the other hand, by protecting technological achievements and preventing non-transactional transfers of them to other countries, these countries maintain their superiority over others; but, countries that are unable to pay for the development of their industries steal technology and exclusive news from others in order to save their incapable industries in economic competition. While continuing the process of legal trade and economic relations with the world economy, such countries provide the main grounds for their economic growth through economic espionage. For example, according to a study, it takes an average of 12 years of continuous work and \$ 231 million to bring a new drug to the US market. Meanwhile, laboratories in Thailand, India and Brazil, after distributing the drug in the United States, steal the formula and commercialize the same product within a few months. It costs American companies \$ 4 billion a year. In fact, countries that do not have the capital to provide staggering R&D funding will not be able to ensure their long-term economic growth if they do not have access to new technologies. Without engaging in economic espionage, the inevitable fate of those countries is to lag behind the course of economic competition. On the other hand, these countries have no choice but to resort to economic information to meet their technology needs. One notable example of this was Soviet attempts to spy on the United States. Given the Soviet technological backwardness compared to the United States during the Cold War and the lack of funding for research and development in all technological fields, since the 1930s and even earlier, the Soviet Union took several steps to achieve technological innovations in the United States and Western Europe, and this continued even under Gorbachev leadership. According to Warner, the primary purpose of gathering economic information (in the form of economic and industrial espionage) is to maintain technological competitiveness and access to superior military technology (William 2014).

Protection of indigenous information to maintain and continue competition in the market

One of the dangers that can endanger the economic security of countries in the age of global economy is the economic espionage of competitors. In such situations, the protection of the country's economic information is the most desirable way to deal with it, because in a world of economic competition, even allied countries seek superiority over each other, and there is basically no such thing as friendly intelligence organizations. The only thing that exists is the intelligence agencies of friendly countries. Therefore, it is necessary to use the counter-intelligence functions of intelligence organizations, which have traditionally focused on the preservation of military and political information in order to preserve technological and economic achievements. The importance of this issue becomes clearer as achieving new innovations and maintaining its relative monopoly is an important condition for increasing productivity and competitiveness in the global economy.

Basically, the industry must have innovation, quality, and production power to be able to compete in the global market. Therefore, the ability of intelligence agencies to safeguard scientific achievements and trade secrets against the access of other governmental and non-governmental actors must also be used. A point that is important in the field of protection functions of intelligence agencies is the protection of economic information of governmental and non-governmental sectors of the country. On the other hand, competitors seeking this information are not just governments, but other global economic actors such as multinational corporations and the like should be considered; because, today both non-governmental actors and governments are able to use international financial markets in line with their goals, the goals that can destabilize the interests and national security of other countries and even the global economy. In today's world, it is very difficult to identify companies in various industrial and economic issues (such as contracts, insurance, investment, and etc.) and it is not easy to trust multinational companies. In today's information age, the national economy should maintain its ability to compete globally and at the same time be able to

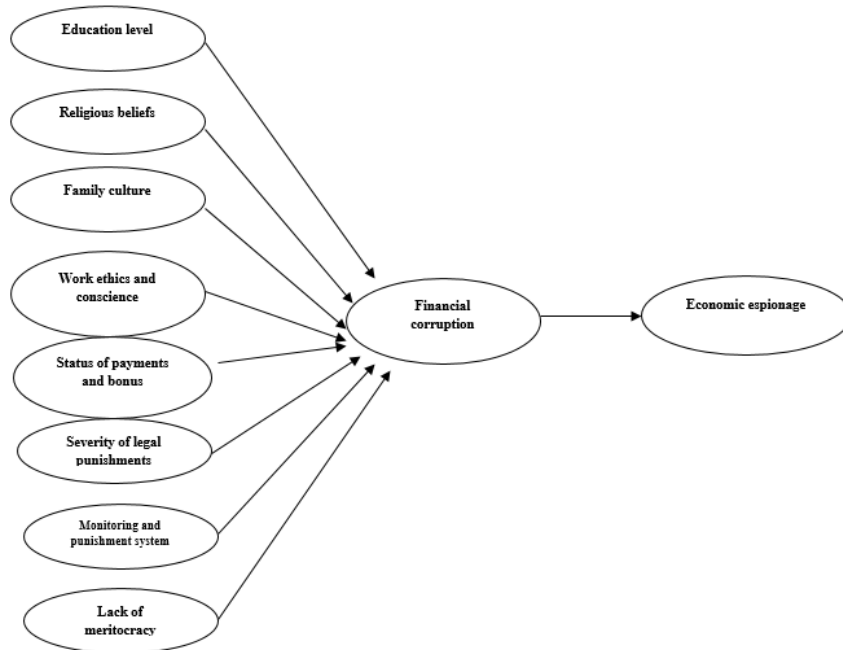
protect its information against competitors, intruders, customers, suppliers and foreign governments (William, 2014).

Some large countries targeted by economic espionage, such as the United States, have passed laws punishing economic intelligence collectors. In 1996, for example, the United States sentenced companies and individuals who stole or transmitted trade secrets to more than 15 years in prison and fined more than \$ 10 million. In 2002, the U.S. Attorney General reinforced the Economic Espionage Act by giving more power to federal attorneys in interpreting legal violations. In 2005, the United States released a national counterintelligence strategy that signaled a change in approach to economic espionage. The new strategy has shifted counterintelligence efforts from a reactive approach to an aggressive approach with an emphasis on protecting sensitive technologies. Law enforcement agencies, such as the Federal Bureau of Investigation (FBI), will receive more resources to defend foreign intelligence operations within the United States. Also, the new strategy provides a secure level of security for economic actors in US business and industry, directly helping companies and private industries, but no US government official has officially disclosed this assistance (William 2014).

Monitoring the development process: Combating corruption and ensuring economic security

One of the important activities of intelligence and security organizations is to play supervisory roles in the economic field. This role may be delegated to a specialized intelligence agency or placed on the agenda of the country's intelligence agency. In the United States, for example, the Treasury Department's Office of Information and Analysis oversees economic activity. In Iran, the legislature states in paragraph 124 of Article 124 of the Fourth Plan for Economic, Social and Cultural Development that "the Ministry of Intelligence shall take the necessary measures to detect macroeconomic corruption and theft of cultural heritage as an officer of the judiciary." It is always said that the creation of appropriate infrastructure such as clear and codified laws, investment security and the absence of administrative and financial corruption are the factors of success of the economic development process of any country (Mir Mohammadi, 2012).

Conceptual model



Conclusion

The effects of corruption can be seen in economic growth, investment, the underground economy, government revenue, social spending, economic development, foreign aids, the political system, economic espionage, crime rates, and inflation. The most general and simple definition of corruption is the abuse of

state power for private gains. The causes of financial corruption vary depending on the environmental conditions and policies, administrative ratios, political development, and social history of each country. Financial corruption will spread if regulatory agencies are weak and government policies create economic rents. Economic information is a factor of competition and reduction of research and development costs. Economic espionage operations lead to the production of economic information. Economic espionage is the theft of exclusive news or trade secrets. Exclusive news refers to news related to resources, activities, research and development, trade and economic policies and sensitive technologies at the disposal and ownership of any governmental or non-governmental economic player. Based on the studies, we concluded that factors such as the level of education of individuals, religious beliefs, family culture, work ethic and conscience, the status of salaries and benefits, the severity of legal penalties, the system of supervision and punishment and the lack of meritocracy can cause motivation in creating corruption and one of the cases of corruption is economic espionage; in other words, the above cases can affect corruption and economic espionage.

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