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# NEGATIVE EFFECTS OF CORRUPTION OFFENSES FOR THE COUNTRY'S ECONOMY

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### ABSTRACT

*The basic notions of "corruption" and "corruption offense" and their relationship are considered. Statistical data concerning the Corruption Perceptions Index in 166 countries is analyzed. Its relationship with the development of the economic sector is also taken into consideration. The main consequences of corruption offenses for the country's economy are determined. Cause-effect relationships have been identified between the Corruption Perceptions Index, GDP per capita and the Human Development Index (HDI) based on panel data from 166 countries in 2018. Human capital and poverty are prerequisites for corruption, which is a significant contribution to the scientific literature on the preconditions and causes of corruption offenses. The impact of corruption offenses on the country's economy at the macro and micro levels is considered. It is established that it is necessary to ensure the development of human capital, political stability, institutional independence, the development of partnership between the state and society in order to minimize corruption offenses.*

# 1. INTRODUCTION

The problem of corruption is one of the most important in the modern economy. It is so because its solution affects the economic development of the country and its attractiveness for foreign capital and investment. This problem drags on both global and national economic progress. "Changing the paradigm of public governance in the context of the challenges of sustainable development" requires the government to control corruption and a centralized approach to solving this problem [1].

The economic consequences of corruption are the annual loss of billions that could be directed to the development of education, medicine and social security. At the macro-economic level corruption leads to economic imbalances in the economies of different countries. At the micro-economic level corruption offenses contribute to the division of society into classes taking into account income, the rich are getting richer, the poor are getting poorer. This is the relevance of this study. The priority number one for the country's economic development is to reduce corruption offenses and detect corruption schemes.

# 2. LITERATURE REVIEW

Researcher in [2] has devoted a lot of works in order to study the concept of corruption. He noted: "At all times corruption is the root from which follows all temptations to flout the laws" [2]. The notion of corruption as an abuse of public office responsibilities for own gain is commonly accepted and widespread [3].

Author in [4] has looked at corruption in a different light. He says "Corruption is a measure that demonstrates the willingness of the ruling elite to serve the public interest but not their own or their family's or friends'" [4].

In [5] was made a significant contribution to the study of corruption offenses and their consequences. Author believed that corruption was a symptom of inadequate legal protection and the weakness of the institutional system, and that the policy of suppressing corruption was the antithesis of the desire of many individuals to develop market economic activity and investment [5]. Paradoxically, but in these cases anti-corruption political leaders come into conflict with citizens who build a market economy with the only available means.

In [6] was conducted an analysis of corruption in international business. The authors consider that corruption reflects illegal activities: bribery, fraud, financial crime, abuse, falsification, favoritism, nepotism, manipulation, etc. These actions are carried out through abuse of power in order to have financial or other benefits by authority (government) or private citizens who are the owners of private firms. The authors also say that countries with low incomes per capita and poor income distribution, as well as those that have high scores on the Hofstede scale and distance of power, are more prone to bribery.

Researchers in [7] have defined corruption as "behavior that deviates from the formal responsibilities of a public role through private (personal, strong ties of family, private) material or status assets; or violates the rules in order to make certain types of private influence."

Authors in [8] while studying the concept of corruption, have noted that corruption is a very complex and multifaceted phenomenon that has many causes and consequences, because it takes different forms and functions in different contexts. They defined the problem of corruption as political, economic or as cultural and moral.

Researchers in [9] understand corruption in the public sector as "an illegal or unauthorized benefit to officials who exploit their positions in order to have some personal gain".

Summarizing the views of scholars concerning the interpretation of corruption, we note that corruption means any behavior of any person who is employed in the public service (politician, judge, public official, civil servant or other equivalent person) or in the private sector, which exceeds their own power and norms of behaviour which are established by legislative acts or internal rules of the company. Such person persecutes own preferences or other people's interests, thereby harming the interests of the country or individuals or legal entities. Corruption has a negative impact not only on the country's economy, but also on the international community of countries and their cooperation.

The traditional understanding of the impact of corruption on the economy suggests the negative effects of corruption on economic growth [10]. Early studies of corruption proves the ineffectiveness of corrupt payments [11], defining the concept of corruption as illegal payments for possible benefits that could be missed without making such payments to the relevant institutions. Corrupt payments can range from small amounts in the form of bribes to the taking of millions of dollars by a civil servant in order to reduce tax payments in order to benefit an international company [10].

Other studies show that corruption promotes economic growth [12-14] through bureaucracy. Here we have an example. In one province in China economic growth is hindered at 0.01% by the introduction of additional positions of a higher official. So, the bureaucracy restrains the flow of investment in the economy due to excessive bureaucracy. Similar conclusions are in a study [15], where the author based on regression analysis of panel data from the Economic and Monetary Community of Central Africa (EMCCA) proves the economic growth by removing administrative burdens, which makes business unavailable to public services and resources.

Modern researches prove the effectiveness of long-term control of corruption and increasing the level of economic freedom. Fighting and combating corruption ensures the openness of the country's economy as a result of economic growth in the long term [16]. Study [17] also show that the impact of corruption through the institutional mechanism on the economy is mitigated: corruption does not affect GDP growth, while the quality of institutions and economic freedom affect the country's GDP growth. The government has to be centralized for the effective economy. This ensures its efficiency [17].

The stability of the political system is a prerequisite for controlling corruption and bureaucracy, ensuring the economic freedom of economic agents and access to resources in the right amounts and at the right time. The preconditions for the development of corruption, which prevail in the country, determine the degree of impact of corruption on the economy. Such prerequisites are institutions, culture, personal qualities of civil servants [18].

The institutional structure of countries determines the impact of corruption on economic growth. It contributes to economic growth in underdeveloped institutions, the formal structure of institutions negatively affects economic growth, corruption, which plays the role of institutions, has a positive effect on economic growth [19].

Analysis of the literature concerning the relationship between economic growth and corruption allows us to formulate three main theories:

1) the theory of social choice (1993-2005), which supports the hypothesis of corruption dysfunction of the political, legal and institutional system, causing economic slowdown through private investment, human capital and open trade;

2) the theory of rigid management (1964-1968) of the political system and considers corruption as an auction and a tough game in the struggle for resources, a high level of competition and information insufficiency;

3) the theory of nonlinear communication or the theory of balance (2000-2010).

The theory of balance considers corruption from two points of view: 1) full balance with conditions of high economic growth, low corruption and political stability (China); 2) low balance or imbalance under conditions of underdeveloped institutions, political instability and partial economic openness.

The theory of social choice is supported in [20] where identified the main determinants of corruption: the structure of state institutions and the political process. There is a high level of corruption in a government with a low level of control, which is viewed in a distorted form compared to taxation due to the necessity to hide data on corruption offenses and crimes.

The theory of social choice defines the problem of corruption and political instability as related factors – the coordination of those who are involved in the management of the political system [21, 22]. Controlling GDP per capita leads to lower public spending on education in corrupt governments. The study [21] lacks an assessment of the cause-effect relationships between poverty and institutional development. Author in [3] sees corruption in terms of a differentiated approach and effects within the theory of social choice and concludes that there are no effective methods of counteraction.

## 2.1. Aim and Objectives

The aim of our study is to assess the cause-effect relationships between corruption offenses and the economy, quality of life and poverty.

## 3. RESEARCH METODS

In the research process a set of general scientific and special methods was used in order to meet the goal. Historical and logical methods were used in the study of theoretical concepts and the development of theories of corruption and corruption offenses. The system approach, methods of deduction and induction, statistical method were used in order to study the state of preventing and combating corruption in the world. Prognostic methods were used in determining directions for optimizing anti-corruption activities.

Models of estimating the relationship between variables to identify cause-effect relationships were built being based on panel data from 166 countries in 2018. Here we have Corruption Perceptions Index, GDP per capita. A regression model based on the Human Development Index (HDI) panel data of 166 countries for 2018 was estimated in order to determine the dependence of corruption on human capital.

## 4. RESULTS AND DISCUSSION

The strength of the corruption impact on the economy also depends on the legal and institutional framework of the country's quality of governance and political regime. This is due to the fact that if there is no political stability and a good legal basis, then there is a favorable environment for corruption that leads to ongoing crises. This situation does not allow to reform various spheres of life and leads to a deterioration in the quality of life.

It is known that in corrupt countries the average income is a third of the income of citizens with low levels of corruption, which indicates that corruption is a serious threat to the social

and economic situation of the country and systematically affects the level of economic development. The correlation between the level of corruption and the level of GDP per capita can be seen in Figure 1.
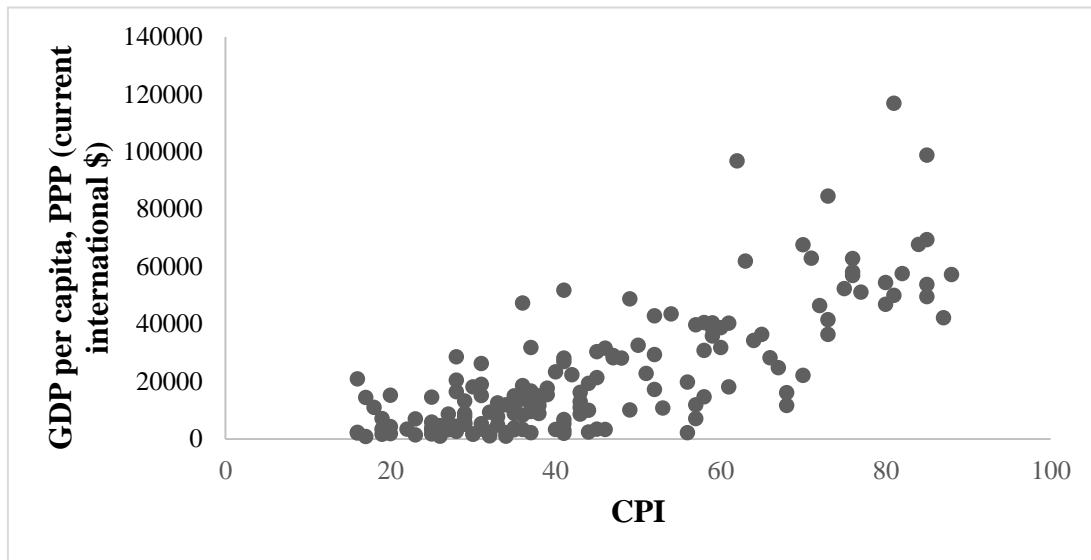


**Figure 1** Corruption Perceptions Index and GDP per capita, PPP (current international $), country data 2018 [23-24]

Transparency International conducts an annual global survey [25]. There is its rank of countries around the world on the prevalence of corruption in the public sector. It is calculated according to the methodology of the international non-governmental organization Transparency International. The least common corruption is in Denmark, New Zealand, Finland, Singapore, Switzerland (countries with high rates of economic development) according to [25].

The dynamics of the rating in general indicates that the problem of corruption is less perceived in the industrialized countries of the West. The bureaucracy has existed for a long time in these countries, during which the relevant traditions and legislation have been formed, as well as the mechanisms of civil society control over the government.

Panel data from 166 countries has found a significant link between quality of life and corruption (Table 1). With a significance level of 1%, it can be argued that an increase of 1 point in the Corruption Perceptions Index leads to an increase in GDP per capita by 11.53%. The level of explanatory possibility of the model is 51.77%, which means the presence of other factors that are influencing the quality of life of the population and which are not included in the model.

A model of the impact of quality of life on the level of corruption was built on the basis of panel data for comparison. The constructed regression model explains the causes of corruption by 51.76%. With a significance level of 1%, we can say that with a 1% increase in GDP per capita, the value of the Corruption Perceptions Index in a country will increase by 0.045166 points, ie the quality of life. Human capital is a prerequisite for corruption and corruption in the country.

**Table 1** Regression model: CPI Score 2018 as dependent variable, GDP per capita as independent variable, panel data 2018 [23-24]

Dependent Variable: CPI_SCORE_2018
Method: Least Squares
Date: 05/21/20  Time: 17:44
Sample (adjusted): 2018 2183
Included observations: 164 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| LOG(GDP_PER_CAPITA__PPP__CURRENT_INTERNATIONAL_$_) | 11.52732 | 0.869028 | 13.26461 | 0.0000 |
| C | -64.22874 | 8.253897 | -7.781626 | 0.0000 |
| R-squared | 0.520639 | Mean dependent var | | 44.42073 |
| Adjusted R-squared | 0.517680 | S.D. dependent var | | 18.76395 |
| S.E. of regression | 13.03142 | Akaike info criterion | | 7.984725 |
| Sum squared resid | 27510.52 | Schwarz criterion | | 8.022528 |
| Log likelihood | -652.7474 | Hannan-Quinn criter. | | 8.000071 |
| F-statistic | 175.9498 | Durbin-Watson stat | | 2.133178 |
| Prob(F-statistic) | 0.000000 | | | |

A regression model was estimated based on the Human Development Index (HDI) panel data of 166 countries for 2018 (Table 2) in order to determine the dependence of corruption on human capital. The constructed model of estimating the dependence between variables proves the significant impact of human capital on the level of corruption (Adjusted R-squared is 0.521). With a significance level of 1%, it can be argued that an increase of 1 point in the HDI leads to an increase in the CPI Score by 2.0218 points, ie the higher the level of human capital development, the higher the country's rating on the CPI Score.

**Table 2** Regression model: CPI Score 2018 as dependent variable, HDI as independent variable, panel data 2018 [24, 26]

Dependent Variable: LOG(CPI_SCORE_2018)
Method: Least Squares
Date: 05/21/20  Time: 17:55
Sample (adjusted): 2018 2183
Included observations: 166 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| HUMAN_DEVELOPMENT_INDEX__HDI_ | 2.021858 | 0.150502 | 13.43407 | 0.0000 |
| C | 2.247726 | 0.110774 | 20.29112 | 0.0000 |
| R-squared | 0.523912 | Mean dependent var | | 3.704170 |
| Adjusted R-squared | 0.521009 | S.D. dependent var | | 0.423378 |
| S.E. of regression | 0.293016 | Akaike info criterion | | 0.394796 |
| Sum squared resid | 14.08078 | Schwarz criterion | | 0.432290 |
| Log likelihood | -30.76808 | Hannan-Quinn criter. | | 0.410015 |
| F-statistic | 180.4743 | Durbin-Watson stat | | 2.209890 |
| Prob(F-statistic) | 0.000000 | | | |

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In 2019 Ukraine lost two points in the ranking of corruption perception compared to 2018 and returned to the level of 2017, ranking 129-th place out of 180. Experts note that in 2018 there was little progress due to the improved interaction between government and business: the procedure of automatic reimbursement of value added tax, expansion of the sphere of the 'ProZorro' and 'DoZorro' systems, opening of the Office of the Business Ombudsman of Ukraine. However, assessments of the adoption of the law on the Supreme Anti-Corruption Court were not very positive, as its launch was postponed for a year. The final indicator of the index was reduced by the NABU's failure to grant the right to autonomous listening and changes to the legislation, known as "Lozovoy's amendments".

Experts from Transparency International Ukraine point out that SRI, like other ratings, can slowly reflect the actual changes in the country. Some states are providing a massive fight against corruption schemes, but the result comes in a few years.

The situation in Ukraine with corruption is much worse than the global one and the main problem in the country is the lack of faith that the situation can be changed for the better. This affects the economic development of the country and the economy.

644 proceedings were registered in 2019 on suspicion of illegal gain and prosecutors handed over 254 suspicions, another 451 cases were "in process", and 278 proceedings were closed. The average bribe in Ukraine is 108,000 UAH [27].

Each year, according to the Corruption Perceptions Index, Transparency International Ukraine provides recommendations on how Ukraine can significantly improve its number in the SRI (Table 3). So, in 2019, 12 recommendations were provided, 6 of which were not implemented. Ignoring 6 recommendations, corruption in Ukraine has increased compared to previous years. Recommendations for 2020 have also been provided and we hope that they will be implemented. It should be noted that along with the increase in corruption offenses, the country's economy has also suffered.

**Table 3** Corruption Perceptions Index 2018, Human development index (HDI) and GDP per capita, PPP (current international $) in Ukraine, 2018 [23, 24, 26]

|  | Corruption Perceptions Index 2018 | Human development index (HDI) | GDP per capita, PPP (current international $) |
|---|---|---|---|
| Ukraine | 32 | 0.750 | 9249,46 |
| Moldova | 33 | 0.711 | 12564,89 |
| Hungary | 46 | 0.845 | 31578,76 |
| Romania | 47 | 0.816 | 29061,26 |
| Slovakia | 50 | 0.857 | 32616,65 |
| Poland | 60 | 0.872 | 31755,77 |

This indicator is 30 in Ukraine. It is 129th place in the ranking, which indicates a significant spread of corruption offenses. However, it should be noted that this country is not a leader in terms of economic development, but occupies a position below average. Syria, South Sudan, Somalia lead the ranking from the end and the economic development of these countries needs significant reforms (Table 4). These countries have been having an unstable political situation and military conflicts for a long time.

**Table 4** Correlation matrix: CPI and GDP per capita [23, 24]

| | GDP_UKRAINE | GDP_SLOVAK_REPUBLIC | GDP_ROMANIA | GDP_POLAND | GDP_MOLDOVA | GDP_HUNGARY | CPI_UKRAINE | CPI_SLOVAKIA | CPI_POLAND | CPI_MOLDOVA | CPI_HUNGARY |
|---|---|---|---|---|---|---|---|---|---|---|---|
| GDP_UKRAINE | 1,000 | 0,454 | 0,524 | 0,468 | 0,173 | 0,486 | 0,487 | -0,153 | -0,536 | 0,142 | -0,302 |
| GDP_SLOVAK_REPUBLIC | 0,454 | 1,000 | 0,937 | 0,966 | 0,885 | 0,984 | 0,903 | 0,711 | 0,325 | -0,610 | -0,877 |
| GDP_ROMANIA | 0,524 | 0,937 | 1,000 | 0,993 | 0,891 | 0,983 | 0,976 | 0,569 | 0,103 | -0,697 | -0,962 |
| GDP_POLAND | 0,468 | 0,966 | 0,993 | 1,000 | 0,922 | 0,996 | 0,970 | 0,645 | 0,206 | -0,715 | -0,960 |
| GDP_MOLDOVA | 0,173 | 0,885 | 0,891 | 0,922 | 1,000 | 0,915 | 0,873 | 0,793 | 0,491 | -0,885 | -0,928 |
| GDP_HUNGARY | 0,486 | 0,984 | 0,983 | 0,996 | 0,915 | 1,000 | 0,952 | 0,668 | 0,243 | -0,682 | -0,936 |
| CPI_UKRAINE | 0,487 | 0,903 | 0,976 | 0,970 | 0,873 | 0,952 | 1,000 | 0,540 | 0,064 | -0,672 | -0,932 |
| CPI_SLOVAKIA | -0,153 | 0,711 | 0,569 | 0,645 | 0,793 | 0,668 | 0,540 | 1,000 | 0,826 | -0,745 | -0,632 |
| CPI_POLAND | -0,536 | 0,325 | 0,103 | 0,206 | 0,491 | 0,243 | 0,064 | 0,826 | 1,000 | -0,518 | -0,218 |
| CPI_MOLDOVA | 0,142 | -0,610 | -0,697 | -0,715 | -0,885 | -0,682 | -0,672 | -0,745 | -0,518 | 1,000 | 0,843 |
| CPI_HUNGARY | -0,302 | -0,877 | -0,962 | -0,960 | -0,928 | -0,936 | -0,932 | -0,632 | -0,218 | 0,843 | 1,000 |

Based on the survey data, we understand that there is an inversely proportional correlation between the level of corruption and economic development of the state in most countries.

Let's analyze the effects of corruption offenses on the state economy in Table 5.

According to [27] on the anti-corruption situation in Ukraine for 2019, we note that the amount of material damages for corruption offenses is 51.8 billion UAH, of which 490 million UAH are reimbursed. To compare the numbers, we present the budget of Ukraine for 2019 - 1 trillion 112 billion [28]. These numbers show that almost 21% of the state budget is spent on corruption offenses, but this is only official data, the number of corruption offenses that have not been identified is unknown. That is, expenses in the budget were increased by 21%, which affected the formation of the budget deficit.

In 2019, the IMF states that the country has insufficient economic growth in an official appeal to Ukraine [25]. One of the reasons for this situation is corruption, and due to the massive corruption offenses, investors do not want to finance the economy of Ukraine.

The consequences of corruption offenses for the country's economy are catastrophic. The responsibility for this situation in the country lies primarily with the head of state, because he controls all spheres of activity. However, we must not forget that corruption is a human factor. It happens both at the macro and micro level.

**Table 5** Consequences of the impact of corruption offenses on the state economy

| Corruption offense | Effect |
|---|---|
| reducing investment inflows | potential investors do not invest because doing business is not clear, business development without additional income from investors is slower |
| reduction of tax revenues | most businesses artificially underestimate their profits in order to reduce tax payments, while giving bribes to regulators so that they do not "see" the real picture, while bribe-takers increase their income, contributing to the development of class division and the budget is short of funds |
| reduction of capital productivity | due to a number of corrupt schemes you have to invest more than you get in the result, it slows down business development |
| decreased quality of public services | reduction of payments for social needs, medicine and education - as quite significant amounts are directed to corruption offenses, social benefits cannot be paid in the full amount, with the reduction of corruption, social benefits increases |
| uneven distribution of income among the population | the rich people are getting richer by profiting from corruption offenses, the poor people are getting poorer |
| reducing the efficiency of economic processes | violation of competitive mechanisms of doing business |
| an increase in budget expenditures at the same time as a decrease in revenue | Affects the formation of the budget deficit, as expences significantly outweigh revenues, in turn negatively affects the goals of fiscal policy |
| distorts property rights | irrational and unfair distribution of resources in society |

All means must be directed to the fight against corruption offenses in order the country to have economic growth. But first of all it is necessary to bring this idea to everyone's attention because bribes are given not by robots, but by people.

It is a fact that corruption must be fought. Each country develops its own methods of anti-corruption policy. Every citizen should remember that there is a penalty for a corruption offense. It is known that the commission of corruption or corruption-related offenses in the manner prescribed by law is led to criminal, administrative, civil and disciplinary liability.

## 5. DISCUSSION

Do corruption offenses always have negative consequences for the economy? Experts do not have the only opinion.

The first group of researchers considers corruption an absolute evil that destroys the economy and destroys high living standards. Corruption offenses ruin the image of the state and make the countries "closed" to international investors. Businesses reduce their tax burden by using corruption schemes, which leads to budget deficits and lower of real GDP.

The second group of researchers argues that it is an auxiliary mechanism in business processes that helps to avoid over-regulation and gives more freedom to business. Also, corruption brings additional personal income and financial help for all family, which is the motivation for committing this act.

Everyone looks at this issue from own point of view, but almost all experts agree that corruption offenses should be detected, fought. It is better to prevent their massive appearance. At the moment, there is no country in the world where there is no corruption. However, there are countries that have minimized the level of corruption offenses, such as Denmark, New Zealand, Finland, Singapore and Switzerland. We need to use their experience

and adapt to our realities, because it has given results in other countries. This problem affects everyone and solving it helps to solve many problems, including economic ones.

## 6. CONCLUSION

After undertaking a study of the impact of corruption offenses on the development of the country's economy, the following conclusions can be made. A corruption offense is the process by which an official directly uses the rights associated with his or her position for personal gain. Corruption has become a fairly common social phenomenon in the background of large-scale transformational changes in recent decades. In fact, corruption has become a well-established norm of relations in all spheres of society. Corruption is a constant companion of state institutions of power. Its beginning can be found as far back in history. Corruption has always existed as a socially negative phenomenon in society since the time of formation of the administrative apparatus.

Corruption contributes to the enrichment of certain citizens and negatively affects the economy as a whole. Cause-effect relationships have been identified between the Corruption Perceptions Index, GDP per capita and the Human Development Index (HDI) based on panel data from 166 countries in 2018. Human capital and poverty are prerequisites for corruption, which is a significant contribution to the scientific literature concerning the preconditions and causes of corruption offenses.

So, let's make a conclusion that each country has developed its own protective measures against the spreading of corruption offenses, but not all of them are effective. To review a set of organizational, legal and other measures at the national level in order to improve the situation is one of the main tasks for many countries. It is also important to increase cooperation at two-sided and regional levels, as well as intensify activities within international organizations in order to fight against corruption and organized crime.

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