

## CORRUPTION PERCEPTION, FINANCIAL SECRECY, AND GLOBALIZATION: AN EMPIRICAL ANALYSIS OF 19 EUROPEAN COUNTRIES

Yolsuzluk Algısı, Finansal Gizlilik ve Küreselleşme: 19 Avrupa Ülkesi Üzerine  
Ampirik Bir Analiz

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### Abstract

This study aims to examine the relationship between corruption and financial secrecy as well as the effects of countries' financial development, money laundering, and globalization levels on corruption. The study analyses the relationship between the corruption perceptions index and the financial secrecy index, financial development index, anti-money laundering index and globalization index of 19 European countries (Austria, Belgium, Switzerland, Cyprus, Germany, Denmark, Spain, France, United Kingdom, Hungary, Ireland, Italy, Luxembourg, Latvia, Malta, Netherlands, Norway, Portugal and Sweden) for the period 2011-2022, for which complete time series data are available, using the System Generalized Method of Moments, which is specific to panel data analysis. The findings of the study show that financial secrecy (FG) and anti-money laundering (AML) variables have a statistically significant and negative effect on corruption perception (CPI), while the globalization (G) variable has a positive and significant effect on CPI. However, the financial development (FGE) variable does not have a significant effect on CPI, and the lagged value of the dependent variable tends to decrease in the perception of corruption by affecting the CPI in a decreasing direction.

### Keywords:

Financial Secrecy,  
Corruption,  
Globalization, Money  
Laundering, System  
Generalized Moments.

### JEL Codes:

D73, G28, O16.

### Anahtar Kelimeler:

Finansal Gizlilik,  
Yolsuzluk,  
Küreselleşme, Kara  
Para Aklama, Sistem  
Genelleştirilmiş  
Momentler.

### JEL Kodları:

D73, G28, O16.

### Öz

Bu çalışma, yolsuzluk ile finansal gizlilik arasındaki ilişkinin yanı sıra ülkelerin finansal gelişmişliklerinin, kara para aklama seviyelerinin ve küreselleşme seviyelerinin de yolsuzluğa etkilerini incelemektedir. Çalışmada zaman serisi eksiksiz verilerine ulaşılabilen 19 Avrupa ülkesinin (Austria, Belgium, Switzerland, Cyprus, Germany, Denmark, Spain, France, United Kingdom, Hungary, Ireland, Italy, Luxembourg, Latvia, Malta, Netherlands, Norway, Portugal ve Sweden) 2011-2022 dönemlerindeki yolsuzluk algıları endeksi ile finansal gizlilik endeksi, finansal gelişim endeksi, kara parayı aklamayı önleme endeksi ve küreselleşme endeksi arasındaki ilişkiler panel veri analizine özgü olan Sistem Genelleştirilmiş Momentler (System Generalized Method of Moments) yöntemi ile analiz edilmiştir. Çalışma bulguları, finansal gizlilik (FG) ve kara para aklama ile mücadele (KPA) değişkenlerinin yolsuzluk algısını (YAE) istatistiki olarak anlamlı ve negatif yönde etkilediği, Küreselleşme (KE) değişkeni ise YAE üzerinde pozitif ve anlamlı bir etkiye sahip olduğu tespit edilmiştir. Bununla birlikte, finansal gelişme (FGE) değişkeninin YAE üzerinde anlamlı bir etkisinin bulunmadığı ve bağımlı değişkenin gecikmeli değeri de YAE'yi azaltıcı yönde etkileyerek yolsuzluk algısında azalma eğiliminde olduğu görülmektedir.

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## 1. Introduction

Corruption is a phenomenon that has multifaceted effects on the global economy and threatens the financial, economic, and political stability of many countries (Alfaro, 2022). Global financial systems, which have an important position in terms of economic growth and sustainable development, also pave the way for the emergence of the most complex forms of corruption (Gheorghe and Gheorghe, 2008; Maxwell et al., 2011). Besides improving economic efficiency, the liberalization of financial markets, the faster movement of capital, and the growth of global trade have also led to more complicated kinds of corruption, like tax evasion, money laundering, and misuse of public funds (Wilhelm, 2002). This kind of shows how complicated the relationship between corruption and financial markets really is. On the other hand, gaps in regulations and weaknesses in oversight mechanisms tend to weaken investor confidence and institutional transparency, which then can cause foreign direct investment (FDI) to drop (Wilhelm, 2002; Sari, 2017).

The complex nature of the corruption phenomenon is not only related to economic indicators of countries, but also to the transformations and institutional interactions brought about by globalization. As globalization deepens economic and financial integration, it has emerged as an important factor shaping the perception of corruption. The liberalization of international trade, the acceleration of capital flows, and the increasing interdependence of global financial systems have the potential to increase institutional transparency but may also diversify opportunities for corruption (Gheorghe and Gheorghe, 2008). The spread of globalization, the strengthening of international supervisory mechanisms, and the acceleration of information flow provide an important advantage in the fight against corruption, while regulatory gaps and deficiencies in supervisory mechanisms may pave the way for corruption to spread to different geographies. Transparency of the financial system, traceability of capital movements, and effectiveness of regulations are also important determinants of the Corruption Perception Index (CPI). In particular, factors such as the allocation of public resources to private interests, irregularities in procurement processes, and tax evasion negatively affect countries' CPI rankings and weaken their position in international financial markets (Chimdi, 2019). Countries with high corruption rates are considered riskier by international credit rating agencies, thus increasing the borrowing costs of the country and limiting its economic growth potential (Lin and Yu, 2014).

On the other hand, while financial expansion is often associated with economic growth, it may also have incentives for corruption under certain conditions. Excessive financial liberalization and expansion may negatively affect CPI. Moreover, some studies suggest that financial expansion may increase the perception of corruption. (Alfaro, 2022).

This study examines the relationship between the perception of corruption and financial expansion, money laundering, globalization, and financial transparency for 19 European countries. The main objectives of the study are to reveal the impact of these variables on the anti-corruption process and to provide data-based solutions to researchers and policymakers. In order to obtain empirical findings in the study, the System Generalized Method of Moments (S-GMM), a method specific to panel data analysis, was used. The analysis process aims to identify the factors shaping the perception of corruption in different developed countries. While this method provides the advantage of including lagged values of the dependent variable in the model, the validity of the method is verified by statistical methods such as the Sargan test and Wald test. In the study, consistent and comparable results were tried to be obtained by using the data set of 19

European countries covering the period between 2011-2022. Since the Financial Secrecy data used in the study are published at two-year intervals, the data of other variables have been organized accordingly.

This study enhances the existing literature in multiple ways, as thoroughly examined in the literature review section. It concurrently investigates the interconnections among corruption perception, financial secrecy, globalization, and money laundering, which have typically been analyzed in isolation in previous research. It broadens the empirical scope by utilizing S-GMM estimation on a cross-country panel of 19 European economies, thereby providing a comparative analysis across developed regions. (iii) It presents new evidence regarding the impact of financial transparency and anti-money laundering policies on perceptions of corruption, highlighting the significance of institutional quality and regulatory frameworks. These elements collectively enable the research to address a deficiency in the empirical literature by synthesizing the facets of financial secrecy, globalization, and corruption within a unified analytical framework.

This study is different in that the perception of corruption is taken together with factors such as financial secrecy, globalization, and money laundering. In particular, the analyses conducted in 19 European countries also contribute to the understanding of regional dynamics. As a result, the importance of measures taken against money laundering and financial transparency in the fight against corruption has been empirically demonstrated in this study.

In this context, the first section of the study provides information on the CPI, and the second section discusses the literature on corruption, financial development, and money laundering. In the following sections, the relationship between corruption and financial secrecy, as well as the effects of countries' financial development, money laundering, and globalization levels on corruption, are analyzed, and the final section presents the results.

## **2. Literature Review**

A line of inquiry emphasizes the role of regulatory deficiencies and financial opacity in fostering corruption. Illicit activities proliferate due to the structural dynamics of the global financial system, inadequate legislation, and a deficiency of transparency (Cobham et al., 2015; Christensen, 2011). Financial system secrecy is intrinsically associated with corruption issues since it facilitates money laundering, illicit capital flows, and tax evasion (Otusanya and Adeyeye, 2022). The inadequacy of oversight and governance frameworks exacerbates these concerns, rendering financial markets a refuge for illegal activities and money laundering (Haberly et al., 2024). Researchers often argue that the risks of corruption are markedly elevated in countries characterized by entrenched financial secrecy and deficient auditing mechanisms (Koyuncu and Yılmaz, 2009). This investigation emphasizes financial secrecy as a crucial element of corruption, providing an essential theoretical framework for analyzing the connection between financial institutions and illicit activities.

Certain theoretical frameworks posit that, under specific circumstances, corruption may enhance trade by diminishing bureaucratic obstacles (Horsewood, 2012). Nonetheless, the prevailing views assert that corruption jeopardizes long-term financial stability, impedes the effective operation of market mechanisms, and exacerbates economic inequality (Mackey et al., 2016). Corruption extends beyond its impacts on financial markets, adversely affecting macroeconomic decision processes as well. Financial crises exacerbate, and public finances are

mismanaged due to insufficient accountability and transparency (Maxwell et al., 2011). Moreover, elevated corruption levels are considered a principal obstacle to economic collaboration, directly affecting trade agreements and international assistance (Transparency International, 2019).

The nexus between money laundering and corruption is intrinsically linked to confidentiality. The literature indicates that these two occurrences are often interdependent and mutually reinforcing (Gordon, 2009; Kyriakos-Saad et al., 2012; Campos et al., 2021). Illicit gains from corruption need the incorporation of laundering into the financial system, and the presence of laundering mechanisms fosters corruption by diminishing the risks faced by corrupt individuals (Christensen, 2011; Barone et al., 2019). Contemporary corruption increasingly operates through complex international networks that encompass offshore entities, intermediaries, financial institutions, and legal service providers, as evidenced by Cooley and Sharman (2015, 2017). By concealing illicit transactions and diminishing the costs associated with global corruption, these networks facilitate companies and political elites in perpetuating lucrative yet unlawful activities. Moreover, money laundering practices and organized crime are often associated with corruption, underscoring the necessity for global cooperation in combating illicit financial transactions (Rose-Ackerman and Palifka, 2018). Recent empirical research substantiates these conclusions, demonstrating that money laundering perpetuates corruption and exacerbates its macroeconomic consequences, such as financial instability and inflationary pressures (Shah and Aish, 2022; Bartulovic et al., 2023). Consequently, the literature clearly indicates that money laundering, corruption, and secrecy engender a detrimental loop that significantly impacts economic stability and financial integrity.

The impact of financial growth and progress on corruption constitutes a secondary primary line of investigation. Nonetheless, the link is complex and context-dependent. Financial development can enhance governance, augment transparency, and reduce corruption. The evaluation often considers the depth, inclusivity, and functionality of financial markets (Ofoeda et al., 2022; Cifuentes-Faura, 2024). Empirical research indicates that efficient laws and oversight enhance financial development, hence mitigating anomalies and fortifying institutional frameworks (Pan et al., 2022). Conversely, financial liberalization lacking sufficient oversight may generate new chances for corruption by increasing channels for rent-seeking behavior (Pozsgai-Alvarez and Pastor Sanz, 2021). The literature underscores a conditional relationship: financial development exerts anti-corruption effects when coupled with robust governance and accountability; however, it may exacerbate corruption risks in frail institutional environments. This thesis is further refined by several comprehensive empirical evaluations.

Altunbaş and Thornton (2012) demonstrate, utilizing a panel of over 100 nations, that financial prosperity generally reduces corruption in both developed and developing settings. Similarly, Song et al. (2021) demonstrate that corruption hinders financial development, whereas economic growth promotes it, with the impacts varying by income level. The results underscore the necessity for differentiated policy strategies: in specific contexts, promoting financial development might mitigate corruption, whereas in other instances, the absence of institutional changes may facilitate its proliferation. Ahlin and Pang (2006) assert that anti-corruption activities and financial growth can act as substitutes, whereby progress in one domain may diminish the marginal effectiveness of the other. Nonetheless, most research often concurs that financial development and anti-corruption initiatives mutually reinforce each other in enhancing institutional integrity and fostering economic growth.

Internationalization and financial openness are examined as elements affecting corruption, alongside progress. Research indicates that openness can enhance accountability and transparency; nevertheless, in contexts with insufficient restrictions, it may also facilitate corruption. Extensive and deregulated financial systems increase the likelihood of institutionalized corruption in countries lacking adequate control, as stated by Pozsgai-Alvarez and Pastor Sanz (2021).

The assertion that outcomes are affected by the robustness of domestic institutions is further corroborated by Sharma and Paramati's (2021) discovery that financial development significantly improves corruption control across various income categories. Additional research examines the impact of financial development on the relationship between FDI and corruption. Krifa-Schneider et al. (2022) illustrate the importance of non-linear dynamics by showing that financial development influences the extent to which corruption deters or attracts FDI. Collectively, these findings indicate that, contingent upon the institutional and regulatory context, financial growth may either facilitate or obstruct corruption.

A third branch of study investigates the effects of corruption and money laundering on macroeconomic stability. Empirical evidence indicates that money laundering perpetuates corruption, exacerbates inflation, undermines financial stability, and detrimentally impacts the economy (Aluko and Bagheri, 2012; Bolarinwa and Soetan, 2019). Younas et al. (2020) and Özşahin and Üçler (2017) demonstrate that money laundering and corruption collaboratively exacerbate inflation by distorting resource allocation and engendering uncertainty. Zaman et al. (2020) assert that corruption-induced money laundering compromises the integrity of financial systems by destabilizing banking in emerging nations. Mauro's (1995) prior assertion that corruption misallocates resources and hinders growth corroborates these findings. The literature underscores the relationship between money laundering and corruption, as well as their broader economic implications, particularly for poor countries grappling with fragile institutions and volatile macroeconomic environments.

Finally, the literature examines how globalization influences the dynamics of corruption. Academics assert that globalization possesses dual facets: it can facilitate corruption by creating new opportunities for illicit activities, while simultaneously curbing it through the implementation of international regulations. The proliferation of offshore financial centers and internet trade has rendered the identification of corrupt practices increasingly difficult (Leiken, 1997; Elliott, 1997). Consequently, the proliferation and increasing entrenchment of corruption within the global economy have been associated with swift global integration (Glynn et al., 1997; Williams and Beare, 1999). Governments are under pressure from globalization to adopt international standards of accountability and openness, particularly due to the influence of institutions such as the World Bank, OECD, and IMF (Sung and Chu, 2003). Although the precise correlation between globalization and corruption remains ambiguous, studies suggest that when countries integrate into the global economy, they often adopt anti-corruption initiatives to meet the expectations of supranational entities (Golden, 2002). Moreover, empirical studies indicate that this link is non-linear, with highly globalized economies generally adopting more stringent transparency measures, although corruption seems to be most prevalent at moderate levels of globalization (Das and DiRienzo, 2009). Simultaneously, elevated corruption levels diminish economic flexibility and erode investor confidence, hence reducing integration (Gheorghe and Gheorghe, 2008). Globalization, contingent upon the robustness of governance institutions and the extent of regulatory supervision, simultaneously mitigates and promotes corruption.

All in all, research kind of shows that the link between globalization, financial development, money laundering, financial secrecy, and corruption is pretty complex and really depends a lot on how good institutions and regulations are. Depending on the governance setup, financial development and globalization can either help reduce corruption or make it worse, while secrecy and money laundering just directly feed it. These points are especially relevant for the current study, which tries to look at how money laundering, corruption, and financial development interact in the international financial system. Looking at the main takeaways, it’s pretty clear that international cooperation, transparency rules, and reforms in the financial sector are all needed if anti-corruption efforts are going to work. So, besides just framing the problem, the literature also gives useful policy hints, showing that corruption really has to be tackled through both national financial governance and international institutional arrangements.

Most research examines these factors in isolation, focuses on specific country groups, or overlooks their interactions within the framework of global financial integration, despite substantial evidence in the existing literature regarding the interconnections among corruption, financial secrecy, money laundering, financial development, and globalization. Moreover, there are mixed findings regarding whether globalization and financial development mitigate or exacerbate corruption; this mostly hinges on the robustness of legislation and the caliber of institutions. This study adopts a distinctive integrative approach by examining cross-country variations while simultaneously addressing money laundering, financial development, and secrecy within the broader context of globalization. This approach provides a comprehensive understanding of how financial institutions can simultaneously mitigate and facilitate corruption, underscoring the critical importance of international cooperation and transparency reforms for the success of anti-corruption initiatives.

### **3. Data and Methodology**

Measuring the level of corruption is difficult because of its broad definition and its illegal nature. Although traditional measuring methods rely on objective data, such as public official conviction rates or bribery case records, these metrics represent just isolated cases and do not reliably reflect the overall extent of corruption (Bartulovic et al., 2023). In this setting, indices evaluating perceptions of corruption offer a more refined comprehension of the phenomenon, potentially impacting decision-making. The CPI is a composite measure that assesses the level of corruption in nations and the public sector's perception of corruption, derived from data aggregated from multiple international organizations (Transparency International, 2019).

In addition to the relationship between corruption and financial secrecy, the study will also examine the effects of countries' financial development, money laundering levels, and globalization levels on corruption. The time series of the study is constructed with the data of 19 European countries between 2011 and 2022 for which complete data are available. Since Financial Secrecy data are published at 2-year intervals, other data are included in the data set accordingly. The list of European countries included in the study is shown in Table 1.

**Table 1. Country List**

Austria	Denmark	Ireland	Netherlands
Belgium	Spain	Italy	Norway
Switzerland	France	Luxembourg	Portugal
Cyprus	United Kingdom	Latvia	Sweden
Germany	Hungary	Malta	

In the study, the CPI was used as the dependent variable, and the Financial Secrecy Index, Financial Development Index, Anti-Money Laundering Index, and Globalization Index were included in the data set as independent variables. Information on the variables used in the study is presented in Table 2.

**Table 2. Variable List**

Variable Name	Abbreviation	Source	Citation	Expected Effect on the CPI
Corruption Perceptions Index	YAE	Transparency Data	Buz and Erul (2018)	Negative Impact
Financial Privacy Index	FG	Tax Justice Network Data	Akanfe et al. (2020)	Negative Impact
Financial Development Index	FGE	IMF Data	Ozkok (2015)	Positive Impact
Anti-Money Laundering Index	KPA	Basel AML	Zhang et al. (2023)	Negative Impact
Globalization Index	KE	KOF Enstitüsü	Efeođlu et al. (2020)	Positive Impact

The variables used in the study were added to the data set by reviewing the studies in the literature, especially those that are thought to have an impact on corruption.

*Corruption Perceptions Index:* This index, published annually by Transparency International, aims to measure the perception of corruption in the public sector in countries (Transparency International, 2023). It is constructed through surveys and expert opinions from different data sources (e.g., World Bank, World Economic Forum, Transparency International, United Nations). Questions measuring opinions about corruption in the nation are asked in these surveys. According to Kaufmann et al. (2010), the index is typically represented by a score ranging from 0 to 100, where 0 denotes the highest degree of corruption and 100 the lowest.

*Financial Secrecy Index:* It is a ranking that assesses countries' attitudes towards ensuring financial secrecy and creating tax havens. This index reveals the lack of transparency in the financial system by analyzing how countries behave in terms of tax evasion, money laundering, and international financial secrecy practices. Each country's financial secrecy practices take into account factors such as banking secrecy, international corporate structures, and tax information secrecy. This index is evaluated with secrecy scores that identify countries as tax havens (Tax Justice Network, 2022).

*Financial Development Index:* It is an indicator that measures the development of countries' financial systems. This index assesses important characteristics of countries' financial markets and institutions, such as depth, inclusiveness, efficiency, and stability. The aim of the index is to analyze the impact of countries' financial infrastructure on development and economic growth. It

also helps to understand what role the financial sector plays in reducing overall economic inequalities and promoting sustainable growth (World Bank, 2022). Three primary components are typically used to measure it:

**Financial Depth:** The magnitude of a nation's financial system and the degree of financial market development.

**Financial Inclusion:** The extent of access to financial services, especially banking and credit facilities.

**Financial Efficiency:** Indicators that measure how effectively financial resources are utilized and market efficiency.

This index is constructed using various data; for example, factors such as loan size, stock market size, banks' assets, borrowing conditions, and the level of access to the financial sector are evaluated (IMF, 2021).

*Anti-Money Laundering Index:* The main purpose of this index is to assess the success of countries in combating money laundering and terrorist financing and to reveal how secure and transparent their financial systems are. The index measures progress in preventing money laundering activities by taking into account country-level implementation levels, supervisory mechanisms, legal framework, and international co-operation (Basel Institute on Governance, 2022).

*Globalization Index:* It is an index developed to measure globalization and determine the level of integration of countries into the global system. This index, published by the KOF Institute, is a comprehensive indicator used to determine the extent to which countries are integrated into globalization at the economic, social, and policy levels. Globalization is a process in which the borders between countries are becoming less and less clear, and this index allows us to analyze different aspects of this process (KOF Swiss Economic Institute, 2022)

The data set of the study was formed with 6 years of data for 19 sample countries. Preliminary tests will be applied first with the data set, and then the S-GMM method, which is appropriate for the data set, will be estimated.

There are various reasons for using the S-GMM in the study. The most important reason is that the lagged value of the dependent variable in the model, i.e., the CPIs, can be added to the model as an independent variable. Another reason for using S-GMM is that horizontal cross-sectional dependence is not taken into account, and the stationarity levels of the series can be ignored. In addition, the S-GMM method is preferred because it can eliminate the endogeneity problem due to the high number of independent variables and gives more accurate results when the time series is less than the number of cross-sections. In addition to these, the following reasons can be considered as supporting the use of S-GMM;

GMM can be applied in linear and non-linear models and can work with different types of data, such as panel data, time series, and cross-sectional data. This flexibility makes the GMM usable in a wide range of models (Newey and West, 1987).

GMM is an estimation method that is robust to heteroskedastic data. Heteroskedasticity refers to the situation where different observation units in the data set have different variances and GMM makes accurate estimates by taking this situation into account (Newey and West, 1987).

GMM requires fewer assumptions for parameter estimation than other methods. This provides a less restrictive modeling (Hansen, 1982).

The model developed for the S-GMM estimation method to be used in the study is as shown in Equation 1.

$$YAE = \beta_0 + \beta_1 YAE_{i,t-1} + \beta_2 FG_{i,t} + \beta_3 FGE_{i,t} + \beta_4 KPA_{i,t} + \beta_5 KE_{i,t} + \varepsilon_{it} \quad (1)$$

In the equation, YAE represents the CPI, FG represents the Financial Secrecy Index, FGE represents the Financial Development Index, KPA represents the Anti-Money Laundering Index, and KE represents the Globalization Index.

### 3.1. Findings and Evaluation

In the application part of the study, firstly, descriptive statistics will be given and tabulated. Then, correlation matrix results for variables will be reported, and multicollinearity will be tested. Then, slope homogeneity results will be reported. Finally, S-GMM panel estimation results will be reported and interpreted.

The descriptive statistics of the variables used in the study, including mean values, standard deviation values, minimum values, and maximum values, are shown in Table 3. As shown in Table 3, the data set consists of 114 observations in total. The mean value of the dependent variable, YAE, is 70.62, the minimum value is 21, and the maximum value is 94. When we look at the independent variables, the mean value of the FG variable is 51.07, the minimum value is 30.87, and the maximum value is 78.4. Another independent variable, FGE, has a mean value of 0.68, a minimum value of 0.21, and a maximum value of 0.987. The average value of the PPA variable was 4.54, with a minimum of 2.36 and a maximum of 90.93. The mean value of the last independent variable, KE, was 85.42, the minimum value was 72.69, and the maximum value was 90.93. When the standard deviation values of the variables are analyzed, it is seen that the variables CPI and FG have higher values than the other variables. The reason for this may be that the European countries included in the data set are at different levels in terms of both development and economic levels.

**Table 3. Descriptive Statistics**

Variables	Number of Observations	Mean	Standard Deviation	Minimum Deviation	Maximum Deviation
YAE	114	70.62281	14.624	21	94
FG	114	51.07246	10.141	30.87	78.4
FGE	114	.6797133	.159	.21	.987
KPA	114	4.535842	.715	2.36	6.241
KE	114	85.42704	3.995	72.685	90.929

The results of the correlation matrix for the variables are shown in Table 4. Since there is no correlation relationship between variables at a level higher than the critical value of 0.80 suggested by Gujarati and Porter (2009), the analysis will continue without any changes in the panel estimation model.

**Table 4. Correlation Table**

Variables	YAE	FG	FGE	KPA	KE
YAE	1.000				
FG	0.146	1.000			
FGE	0.484	0.044	1.000		
KPA	-0.165	0.352	0.036	1.000	
KE	0.677	0.115	0.699	-0.092	1.000

In the study, whether there is a multicollinearity problem between the variables is determined by the Variance Inflation Factor (VIF) test, as shown in Table 5. As can be seen from Table 5, there is no multicollinearity problem in the variables. In addition, this finding is also confirmed by the VIF values in the table. It is seen that all VIF values are smaller than 5.

**Table 5. VIF Test Results**

Variables	VIF	1/VIF
FG	2.09	0.479436
FGE	2.02	0.494698
KPA	1.20	0.833238
KE	1.18	0.844029
Mean VIF	1.62	

Table 6 presents the System GMM estimation results. As can be seen in Table 6, firstly, whether the data set is suitable for S-GMM is determined according to the Sargan test results and R2 test results. The Sargan test is used to measure whether the variables used in the model are valid and whether there is an over-identification (Arellano, 2003). The test is performed in the case of over-identification, where the number of variables in the model is high. This test checks whether the instruments accurately represent the model (Wooldridge, 2010). If the test probability result is below 0.05, it is concluded that the variables are not valid for the S-GMM. In the model, the probability value of the Sargan test is 0.25 and it is seen that the variables are suitable for S-GMM.

**Table 6. S-GMM Estimation Results**

Variables	Coefficient	Std. Err.	Prob.
YAE(t-1)	-0.0212516	0.0092645	0.022**
FG	-0.1793693	0.0215925	0.000***
FGE	4.017599	3.885846	0.301
KPA	-1.048832	0.320433	0.001***
KE	2.012639	0.4458344	0.000***
cons	-89.65142	39.31892	0.023**
Wald chi <sup>2</sup> 4291.89		Sargan test 16.00557	
Prob > chi <sup>2</sup> 0.0000		Prob 0.2488	
R1 -0.46171		R2 -0.4194	
Prob 0.6443		Prob 0.6749	

**Note:** \*, \*\*, \*\*\* indicate 10%, 5% and 1% significance levels, respectively.

The main reason the two-step estimation method is chosen in the System GMM approach is that it yields more robust and efficient standard errors. A more dependable covariance matrix is produced by the two-step estimator, which takes into consideration possible heteroskedasticity

in the error terms, whereas the one-step estimator assumes homoskedasticity. This is especially crucial in panel data analyses with small sample sizes. Additionally, System GMM is built for dynamic panel models by default, and by using the variables' lagged values as internal tools, it can handle non-stationarity problems. Therefore, running unit root tests is not strictly required. Even when non-stationary panels are present, consistent estimation is made possible by the use of suitable instrumental variables within the parameters of System GMM assumptions. For these reasons, unit root testing has not been considered necessary in this study, and the two-step System GMM estimator has been used.

In addition, the model includes the R1 test for the validity of moment conditions and the R2 test for the validity of variables. The R1 test tests whether the moment conditions are properly specified and whether the model is correctly constructed (Arellano, M., 2003). If the probability results of R1 and R2 are less than 0.05, it indicates that the moment conditions are invalid or the variables are not valid. As seen in Table 6, the probability value of the R1 test is 0.64, and the probability value of the R2 test is 0.68. This indicates that the model and variables are suitable for S-GMM.

Another test result is the Wald Test. The Wald test is performed to test whether the parameters are collectively zero in the GMM estimation model. This test tests all parameters in the model to be zero together (Wooldridge, 2010). If the probability value of the Wald Test statistic is below 0.05, it is decided that the parameters are non-zero and the model is significant. In the study, the probability value of the Wald Test statistic is 0.00.

According to the results of the S-GMM estimation, every other variable in the model exhibits a statistically significant relationship with the dependent variable, RTA, except for the FGE variable. The lagged value of RTA is observed to decrease its current level by 0.02 at the 5% significance level, indicating a gradual reduction in corruption within the European public sector relative to the prior year. The FG variable exhibits a negative and statistically significant effect on RTA, with a coefficient of -0.18 at the 1% level. This finding may indicate that initiatives enhancing financial transparency and diminishing financial secrecy improve public perceptions of corruption. The AML variable exhibits a statistically significant coefficient of -1.05 at the 1% level, indicating a negative correlation with RTA. This discovery indicates that more favorable views of corruption correlate with stronger anti-money laundering measures in Europe. Conversely, the BE variable exhibits a coefficient of 2.01 at the 1% significance level, indicating a positive and statistically significant impact on RTA. This finding may be linked to the wider implications of globalization, such as free trade agreements, multinational corporate activities, and cross-border capital movements. These effects typically augment the volume of financial transactions, potentially heightening perceptions or risks of corruption. Although the results provide valuable insights, they must be interpreted with caution. To comprehensively contextualize these findings, further examination of the relevant literature is necessary.

The findings are consistent with the expected results in Table 2. Leite and Weidmann (1999), which is also consistent with the findings in the literature analysis. Ferwerda (2009), Hanousek and Kochanova (2015) studies are available. In addition, Graeff and Mehlkop (2003), Neumayer (2002), and Dong and Torgler (2013) obtained contrary results.

#### 4. Conclusion

This study examined the correlation between the CPI and the globalization, anti-money laundering, financial development, and financial secrecy indices in a sample of European nations. The S-GMM estimation technique was employed to examine data from 19 European nations from 2011 to 2022. The findings indicate that perceptions of corruption in European nations have progressively improved, suggesting enhanced efficacy of anti-corruption initiatives. The execution of reforms and anti-corruption measures is a principal factor contributing to this trend. Institutional credibility seems to have been bolstered, particularly through enhanced judicial transparency, accountability of state institutions, and the establishment of more rigorous monitoring protocols. This aligns with extensive research emphasizing the significance of institutional reforms and a strengthened rule of law in reducing corruption levels (Treisman, 2000; Rose-Ackerman and Palifka, 2016).

The analysis of the financial secrecy index indicates that elevated perceptions of corruption correlate with increased financial secrecy. This indicates that anti-corruption efforts are obstructed by the financial system's deficiency in auditing and transparency. Our findings corroborate those of Christensen (2011) and Cobham et al. (2015), demonstrating that financial secrecy undermines public trust by diminishing accountability and facilitating illicit financial transactions. Consequently, robust anti-corruption legislation and enhanced financial transparency mitigate public and investor perceptions of corruption.

The findings indicate that diminished perceptions of corruption correlate with elevated anti-money laundering index values. This indicates that European nations have been relatively effective in combating money laundering, thereby bolstering their anti-corruption initiatives. These findings correspond with those of Unger and Ferwerda (2011), who emphasize that effective anti-money laundering measures are a crucial tool in combating corruption, as they both impede illicit financial flows and promote institutional integrity. The findings indicate that perceptions of corruption are positively correlated with rises in the globalization index.

This result implies that while increased global integration promotes economic openness, it may also highlight governance flaws and increase the visibility of corruption. This finding is consistent with Das and DiRienzo (2009), who note that integration without strong oversight can increase the risk of corruption and report a non-linear relationship between globalization and corruption. According to Glynn et al. (1997), corrupt practices may spread more easily across national boundaries as a result of fast economic globalization.

From a policy standpoint, the results emphasize the necessity of a more unified European framework that concurrently tackles money laundering, financial secrecy, and the dangers of globalization. Illicit financial flows would be diminished if cross-border information exchange were enhanced, financial institutions were rendered more transparent, and regulatory agencies maintained their independence. The findings indicate that, particularly in countries with underdeveloped institutional frameworks, anti-money laundering initiatives must prioritize effective enforcement and capacity building alongside formal standard compliance. The governance vulnerabilities associated with globalization, revealed by increased integration, may be mitigated through the establishment of supranational monitoring mechanisms within the EU framework. Moreover, enhancing a nation's position in the CPI would bolster investor confidence and foster long-term economic stability.

By concurrently analyzing financial development, globalization, anti-money laundering, and financial secrecy within a single empirical framework, this study adds to the body of existing research in terms of academic contribution. The integrated approach employed here provides a comprehensive understanding of how different aspects of financial governance interact to influence perceptions of corruption, whereas prior research has often analyzed these dimensions in isolation. The study provides region-specific insights that augment the predominantly global or cross-regional analyses in the literature by focusing solely on European countries. Finally, it is important to acknowledge that the study has certain limitations. Future research may produce more comprehensive results as new and more complete data become accessible, given that the current estimation relies on a restricted dataset. Moreover, there remains a scarcity of empirical research specifically investigating the interplay between financial secrecy and corruption within the European context.

This study helps close this gap by integrating these aspects with globalization, financial development, and anti-money laundering into a single framework. By doing this, it not only adds to previous research that addressed these elements separately but it also offers fresh perspectives on how global integration and financial governance work together to influence corruption dynamics. This study combines these aspects into a single framework and applies it specifically to European nations between 2011 and 2022, in contrast to a large portion of earlier research that has tended to look at corruption in relation to financial secrecy, money laundering, or globalization separately. Furthermore, compared to many previous studies, the analysis more successfully handles possible endogeneity issues by utilizing the S-GMM estimator. This dual contribution sets the study apart from earlier research and enables a more thorough comprehension of the factors influencing perceptions of corruption, both in terms of scope and methodology.

#### **Declaration of Research and Publication Ethics**

This study, which does not require ethics committee approval and/or legal/specific permission, complies with research and publication ethics.

#### **Researcher's Contribution Rate Statement**

The authors declare that they have contributed equally to this article.

#### **Declaration of Researcher's Conflict of Interest**

The authors declare that there are no potential conflicts of interest in this study.

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