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Does the misuse of net errors and omissions arise from a corruption culture?

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Abstract. The balance of payments, particularly the current account deficit, has long been of interest to researchers. However, there is a paucity of research on the net errors and omissions in this context. Nevertheless, some countries have been resorting to the net errors and omissions account as a means of offsetting persistent current account balance deficits, a practice which can cause many macroeconomic problems such as increasing exchange rates, inflation, unemployment, and economic contraction. This paper investigates the relationship between net errors and omissions (NEO) by setting them as the dependent variable and finance, capital, current account balance, reserves, and corruption as independent variables. The data availability constraints allow for the analysis of 25 countries with the highest volumes of net errors and omissions over the period 2012-2021. Preliminary tests indicated that ridge regression would be the optimal research method. The results suggest that corruption has a statistically significant positive effect on net errors and omissions. In other words, countries with higher levels of corruption tend to misuse the NEO account for the balance of payments. However, since NEO cannot serve as a reliable instrument for addressing current account deficits, governments should implement structural solutions rather than employing short-term fixes.

Keywords: Net errors and omissions, corruption, balance of payment, ridge regression.

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1. INTRODUCTION

The balance of payments refers to a financial statement that presents the transactions involving goods, services, income, and property between a specific country and the rest of the world within a particular period. It also encompasses the alterations in the country's holdings of monetary gold, special drawing rights, and its claims and obligations to other nations. (IMF, 1977: 7). Thus, the balance of payments is a significant and comprehensive metric that offers insights into the economic performance, trade policies, macroeconomic indicators, and overall economy of a nation; it also facilitates comparisons of its economy with the global landscape (Širaňová and Tiruneh, 2016). The double-entry system is the foundation for constructing the balance of payments, whereby each transaction is meticulously recorded with two entries of equal magnitude: once as a credit denoting a positive value and once as a debit indicating a negative value. Based on the principles of the double entry system, the total of positive entries and negative entries must be equivalent, thereby resulting in a balance of payments equilibrium of zero (IMF, 1977).

In accordance with the double-entry system, the balance of payments should ideally be zero. However, in the real world, this outcome is frequently unattainable. The net errors and omissions component is used to eliminate any imbalance and guarantee equilibrium in the balance of payments. Net errors and omissions are explained by the fact that savings measured in absolute terms (current account and capital balance) and financial flows measured in fiscal balance statistics are unequal (Blomberg et al., 2003, p. 43). The concept of net error and omission, alternatively referred to as statistical inconsistency, serves the purpose of rectifying discrepancies arising from either overstatements or understatements within the balance of payments (Adekunle, 2012, p. 307). To reach this objective, net errors and omissions are derived by deducting the balances in the current and capital accounts from the balance in the financial account (IMF, 2009, p. 11).

Net errors and omissions have been one of the components of this statistical table since 1948 when the balance of payments was first introduced. Nevertheless, although the initial insignificance of this account item resulted in its lack of emphasis, the expansion and intricacy of the accounts within the balance of payments as economies develop have brought the net error and omissions into greater prominence (Kristinsson, 2016, p. 10). The observed expansion of the net errors and omissions component suggests potential issues within the reporting mechanism of the balance of payments accounts. However, it is important to note that a low value does not necessarily imply accurate reporting of the balance of payments. The neutralisation of major errors in the credit and debit parts of the balance of payments reported according to the double-entry system may make the net error omissions much smaller than it is (Širaňová and Tiruneh, 2016: 7). Considering the significance of the balance of payments as a crucial metric for assessing a country's economic performance, it is noteworthy to observe the notable increases in the net errors and omissions component, reflecting the balance deviations. Duffy and Renton (1971) conducted a preliminary analysis of the factors contributing to the significant magnitude of net errors and omissions. Their study highlighted the impact of foreign trade, investment, and capital movements and the influence of timing errors that arise while reporting the balance of payments. Another pioneering study to explain net errors and omissions emphasises that net errors and omissions are caused by incorrect recording of transactions in the balance of payments (errors) and some transactions not being recorded at all (omissions) (Fausten & Brooks, 1996). Numerous studies have examined the influence of timing and measurement errors on the net errors and omissions item, with additional investigations also considering macroeconomic factors (Blomberg et al., 2003; Fausten & Pickett, 2004; Tang, 2006; Lin & Wang, 2009; Vuksic, 2009; Adetiloye, 2012).

Nevertheless, the size of the net errors and omissions is also influenced by the degree of institutional quality. It is anticipated that in nations characterized by strong institutional quality, an improvement in the

performance of reporting systems will lead to a decrease in the size of net errors and omissions (Ding and Tang, 2019: 8). The indicators of institutional quality encompass five sub-criteria, namely voice and accountability, government effectiveness, regulatory quality, rule of law, and corruption (IQI, 2023). Each indicator holds significance in ensuring the efficient operation of institutions within a country and offering insights into the country's reliability and risk factors. High-quality institutions play a crucial role in ensuring the dependability of the balance of payments and mitigating the magnitude of net errors and omissions. However, there is a limited availability of research (Ding & Tang, 2019; Širaňová et al., 2021) investigating the impact of institutional quality indicators on net errors and omissions.

This study aims to investigate the impact of corruption, a key indicator of institutional quality, on net errors and omissions. This study employed panel data analysis to examine the determinants of net errors and omissions from 2002 to 2021, focusing on the 25 countries with the highest net errors and omissions. The study includes the corruption perception index as an independent variable, while the balance of payments components, including the current, capital, finance, and reserve accounts, are utilised as control variables. While examining the effects of corruption on capital flight in the literature (Le & Rishi, 2006; Osei-Assibey et al., 2018; Mwangi et al., 2019), no study has been found that examines the relationship between net errors and omissions, one of the components of capital flight (Eggerstedt et al., 1995), and corruption. The primary objective of this study is to contribute to the literature by investigating the relationship between corruption and net errors and omissions. Within this context, the second part of the study examines the empirical literature related to net errors and omissions. The third segment focuses on the data set and methodology employed in the study, while the fourth segment presents the empirical findings that were derived from the analysis. The study's empirical findings were used to develop policy recommendations in the conclusion section.

2. LITERATURE REVIEW

Examining the studies on net errors and omissions, the current literature on this subject is quite limited. While there are studies examining the factors affecting net errors and omissions and their sustainability (Tang & Lau, 2008; Taştan, 2015; Ding & Tang, 2019), there are also studies in the literature that consider net errors and omissions the leading indicator of unregistered capital flight (Siranova et al., 2021) and examine the causes of capital flight.

A pioneering study examining the factors affecting net error and omission items in the literature was conducted by Duffy and Renton (1971). The study investigated the determinants of net errors and omissions for the United Kingdom by regression analysis considering the period 1958-1967. According to the empirical findings, the level of international trade, private sector investments, and short-term capital movements affect net errors and omissions, and the lags in net errors and omissions are significant. Lags in net errors and omissions show that timing errors impact net errors and omissions. Fausten and Brooks (1996), one of the studies that emphasised erroneous records while explaining the net errors and omissions, examined the effects of the components of the balance of payments on the net errors and omissions item in the Australian economy for the period 1959:Q4-1992:Q3. They concluded that the balance of payment accounts --only is insufficient for explaining and that the errors in the accounts kept with the double registration system affect the net errors and omissions. It has also been stated that differences in the level of interaction between the domestic economy and the rest of the world result in deviations in net errors and omissions. Blomberg et al. (2003), in their study on the Swedish economy, stated that the liberalization and increase in financial flows effectively increased net errors and omissions in the late 1980s and 1990s. Furthermore, they stated that the measurement of net exports above the actual level, errors in reporting household direct investments abroad, and errors in reporting securities trade and banking sector foreign transfers are all effective. Fausten

and Pickett (2004) investigated the factors influencing the net error and omissions item for the Australian economy and the 1961-2000 period, emphasising reporting errors in the same way that Fausten and Brooks (1996) and Blomberg et al. (2003) examined. They concluded that errors in reporting cross-border financial transfers are the primary cause of net errors and omissions. Tang (2006) examined the effects of balance of payments components on net errors and omissions for the Japanese economy and the 1985M:1-2004M4 period. According to the findings, foreign direct investments, portfolio investments, and service account and timing errors impact net errors and omissions. Lin and Wang (2009) investigated the effects of timing errors, trade openness, and capital flows on net errors and omissions in Norway, Sweden, South Africa, and the Philippines from 1980Q1 to 2007Q4. The study determined that South Africa's timing errors and Norway's trade openness effectively affected the net errors and omissions.

Another study that investigated the effect of measurement errors on the net error and omissions item was Vuksic (2009), who examined the effect of tourism on the net error and omissions item for Croatia by considering the third quarters of the 1999-2007 period and found that errors in the reporting of foreign tourist expenditures affected positively net errors and omissions. Adetiloye (2012) investigated the factors influencing the net error-omission item for the Nigerian economy and the 1970-2007 period. Empirical findings indicate that the net errors and omissions of items are caused by misrepresenting incoming capital in the balance of payments balance sheet.

Among the studies on the factors affecting the net errors and omissions in the literature, Tang (2006) examined the effects of the exchange rate on the net errors and omissions item in the Japanese economy for the 1985M1-2004M4 period and found that the exchange rate affected the net errors and omissions item. Freund and Spatafora (2008) investigated the effect of remittances on net errors and omissions for 104 countries from 1995-2003 and concluded that remittances negatively affected net errors and omissions. Širaňová and Tiruneh (2016) examined the effects of balance of payments items and macroeconomic indicators on net errors and omissions for the 1997Q1-2014Q2 period and the Slovak economy. In the study, it has been determined that the net errors and omissions of goods, services, income accounts, and nominal GDP negatively affect the long run. At the same time, foreign direct investments and world GDP have a positive effect. Tang (2017) found a direct causality relationship between real GDP, real exchange rate, and foreign real GDP to net errors and omissions, as well as an indirect causal relationship from the real interest rate in his study examining the Australian economy and the 1960Q-2010Q2 period. Širaňová et al. (2021) investigated the factors affecting the net errors and omissions by associating informal capital flight with net foreign direct capital movements for 31 European countries from 2006-2017. According to the study, differences in interest rates, the volume of foreign trade, foreign direct capital flows, and the level of institutional quality impact net errors and omissions over the long term. The Turkish economy's net errors and omissions were examined by Keşap and Sandalclar (2021) for 2008Q1-2020Q3, and they concluded the conclusion that while the shuttle trade, tourism revenues, and export level did not affect the net errors and omissions, the foreign deposits of the domestic residents had a long-term negative impact. Yilmaz (2022) conducted a study on the factors influencing the net errors and omissions in the Turkish economy from 1989 through 2020, which yielded contrasting findings compared to the research conducted by Keşap and Sandalclar (2021). The study found that foreign deposits of domestic residents and shuttle trade had a negative short-term impact on net errors and omissions. Additionally, the exchange rate had a negative effect on net errors and omissions in both the short and long term. The interest rate and services positively impacted net errors and omissions in the short and long term. Şahin (2022) examined the impact of trade volume and GDP on net errors and omissions in Singapore, Malaysia, the United States of America, Uruguay, and the Philippines from 1980 to 2018. The study determined a negative impact on trade volume and a positive impact on GDP, which contrasts with the findings of Širaňová and Tiruneh (2016).

Studies investigating the sustainability of net errors and omissions are also research subjects in the literature. Among these studies, Tang and Lau (2008) examined the sustainability of net errors and omissions for Bangladesh, Indonesia, Korea, Malaysia, the Maldives, Mongolia, Myanmar, Nepal, Pakistan, the Philippines, Singapore, Sri Lanka, and Thailand from 1972–2004. According to the unit root analysis results, it was concluded that the net error and omission items for Singapore, Bangladesh, Indonesia, Korea, and Malaysia are sustainable. Taştan (2015) conducted a unit root analysis to examine the net error and omission in 33 OECD countries from 1960Q1 to 2015Q1. Evidence suggests that Australia, Canada, Hungary, Norway, Switzerland, and the United States indicate sustainable net errors and omissions. The study highlights the significance of nonlinearity in net errors and omissions, emphasizing the need for its consideration. In another examination conducted by Ding and Tang (2019), the sustainability of the net errors and omissions item was explored. This study analyzed the net errors and omissions of 98 countries from 1996 to 2016, applying 11 distinct unit root tests. Additionally, the study employed regression analysis to examine the factors that influence the net errors and omissions item. The analysis revealed that the net errors and omissions item demonstrated sustainability based on a minimum of three out of the 11-unit root tests. Additionally, the analysis indicated that the institutional quality indicators influenced the net errors and omissions, whereas the income distribution did not exhibit any significant impact.

Upon examining the current literature on net errors and omissions, it becomes evident that measurement and timing errors significantly affect this item. Additionally, the balance of payments accounts and macroeconomic indicators influence net errors and omissions. Some studies indicate that institutional quality indicators also impact net error and omissions. This study aims to analyze the impact of corruption, an indicator of institutional quality, on net errors and omissions in conjunction with the components of the balance of payments.

3. RESEARCH METHODS

3.1. Research design

This study's section comprises the 25 countries with the highest net error and omission calculations. The aim is to analyze the effect of corruption on net errors of omissions as a tool for financing the current account deficit.

The net errors and omissions formula is Finance Account –(Current Account + Capital Account) (Krugman, Obstfeld, Melitz, 2017:332). All explanatory variables of NEO are added to the model, including the CPI-Corruption Perception Index as the corruption indicator.

Two models established are;

$$NEO = f(Fin, Cap., Cur, Res, CPI)$$

$$NEO = \alpha + \beta 0Cap + \beta 1Fin + \beta 2Cur + \beta 3Res + \beta 4CPI + \upsilon t$$

In the formula $and\ \beta$emonstrates coefficients and υ used for the vector of the error terms. Some pre-tests, such as heteroscedasticity, normality, and variance inflation factor tests, are applied to choose the proper test for achieving effective results from the model. After gathering the results of the pre-tests due to the multicollinearity problem, the ridge regression method is imposed to achieve an outcome for the impact of corruption NEO. Ridge regression, which was developed by Hoerl (1962) and Hoerl (1970), is imposed. Hoerl used a parameter called a biasing constant where the OLS-Ordinary Least Square coefficient estimation formula of $\beta_{OLS}=(X^tX)^{-1}X'Y$ modified as $\beta_R=(X^tX+\lambda I)^{-1}X'Y$ where λ is the penalty parameter for each explanatory variable

3.2. Sampling and data collection

Data related to the items of the balance of payments, net errors and omissions, capital balance, net financial account, and current account balance are sourced from the World Bank. To achieve reasonable coefficients, the ratio of these accounts to total trade volume (exports+imports) is calculated. The details of the data can be seen in Table 1.

Table 1

Data Details

Abbreviation	**Data**	**Sources**	**Explanation**
NEO	Net Errors and Omissions	Worldbank	% form-ratio to total trade volume
CPI	Corruption Perception Index	Transparency Organization	Index
Cap	Capital Balance	Worldbank	% form-ratio to total trade volume
Fin	Finance	Worldbank	% form-ratio to total trade volume
Cur	Current Account Balance	Worldbank	% form-ratio to total trade volume
Res	Reserves	Worldbank	% form-ratio to total trade volume

Source: own compilation

The corruption perception index (CPI) is used for corruption. CPI has a scale from 0 to 100 where '0' denotes highly corrupt and '100' denotes very clean regarding corruption. According to the availability of the data yearly and for the period 2012-2021, it is used for 25 countries (Table 2) with the highest net errors and omissions volumes.

Table 2

Countries Included in the Analysis

Albania	Korea, Rep.	Spain
Bahamas	Kuwait	Sudan
Brazil	Morocco	Switzerland
Bulgaria	Niger	Turkiye
Cameron	Nepal	Uganda
Canada	Romania	Ukraine
Colombia	Pakistan	United States
Japan	Kenya	Uruguay

Source: own compilation

It is observed that for some countries and specific years when the current account deficit rises dramatically, the volume of NEO is almost equal to or sometimes even more than the current account deficit itself. This situation is inconsistent with the content of the net errors and omissions component. High volumes in this component, whose source is unclear, can raise suspicion.

Table 3

NEO Ratio and CPI by Countries

	Average of NEO in CA (%)	Average of CPI		Average of NEO in CA (%)	Average of CPI
Albania	-8,5	35,2	Morocco	-28,8	38,9
Bahamas	-17,8	67,1	Nepal	-97,5	30,5
Brazil	-5,5	38,8	Niger	0,8	33,3
Bulgaria	-737,4	42,1	Pakistan	15,5	30,2
Cameroon	3,8	25,8	Romania	4,9	45,2
Canada	-7,8	80,2	Spain	36,1	60
Colombia	-5,6	37,1	Sudan	-26,6	14,5
Japan	2,5	73,7	Switzerland	47,8	71,9
Jordan	-6,9	48,6	Turkiye	-19,9	42,5
Kenya	-0,8	27,4	Uganda	-21,8	26,5
Korea	1,5	56,7	Ukraine	-9,3	29
Kuwait	-26,8	42,6	Uruguay	-10,4	71,8
United States	-1,7	71,9			

Source: own calculation

Table 3 provides the research period averages of the ratio of net errors and omissions to the current account deficit for the countries under study and the corresponding period averages of the corruption index. It is observed that in the table, the ratio of net errors and omissions to the current account balance is very high for some countries.

Descriptive statistics of the data used can be followed from Table 4.

Table 4

Descriptive Statistics

Variables	***Obs***	***Min***	***Max***	***Mean***	***Std.Dev.***
NEO	250	-.0401071	1.675733	.038718	.1828651
Cap	250	-.0670598	.1992445	.0144862	.0361002
Cur	250	-6.693635	.7221096	-.1842781	.7521552
Fin	250	-5.144019	.7669338	-.1306802	.5793624
CPI	250	11	84	45.66	18.19419
Res	250	-2.268021	.2319261	-.0202145	.2460035

Source: own calculation

Hence, since no paper exists on the relationship between corruption and net errors and omissions, the literature and research results could not be compared. The rest of the independent variables' sign expectations parallel the literature. The most important reason for this is that the independent and dependent variables are considered part of the formula for the net errors and omissions component (Table 5).

Table 5

Signal Expectations and References for Explanatory Variables

Variables	**Sign Expectation**	**References**
Cur	negative	Krugman, Obsfeld, Melitz (2017)
Cap	negative	Krugman, Obsfeld, Melitz (2017)
Fin	positive	Krugman, Obsfeld, Melitz (2017)
CPI	positive	No reference in the literature
Reserve	negative	Krugman, Obsfeld, Melitz (2017)

Source: own calculation

4. EMPIRICAL RESULTS

Some pre-tests, such as heteroscedasticity, normality, and variance inflation factor tests, are applied to choose the proper test for achieving effective results from the model.

4.1. Empirical Results for Heteroscedasticity

F test that all u_i=0: F(24, 194) = 1.28 Prob > F = 0.1823
F test that all u_i=0: F(9, 235) = 0.89 Prob > F = 0.5360
LR test of sigma_u=0: chibar2(01) = 0.00 Prob >= chibar2 = 1.000

The test results conclude that BLUE—Best Linear Unbiased Estimator conditions are met for OLS-Ordinary Least Square. The OLS method is imposed after achieving the homoscedasticity and independence of the error terms.

4.2. Normality Test Result

Chi-squared statistic: $\chi2(2)=4.73\backslash chi^2(2) = 4.73\chi2(2)=4.73$
Prob > chi2: 0.0937

The model shows a normal distribution since the obtained result has a probability value greater than 0.05.

4.3. OLS Results

Before identifying the presence of the multicollinearity problem, OLS results are also included in Table 6 to highlight the difference compared to ridge regression.

Table 6

OLS Results

NEO	**Coef.**	**Std.Error**	**t**	**P>|t|**	**[95% Conf. Interval]**
CPI	-.0000358	.0000177	-2.02	0.044	-.0000706 - 9.74e-07
Cap	-.9902396	.012866	-76.97	0.000	-1.015582 -.964897
Fin	.9958921	.003249	306.53	0.000	.9894927 1.00292
Cur	-.9942601	.0031042	320.30	0.000	-1.000374 -.9881457
Res	-.0070231	.0030959	-2.27	0.024	-.0131212 -.000925
cons	.0014785	.0009214	1.60	0.110	-.0003363 .0032934

Number of obs 250
Prob > F 0.0000
R-squared 0.9994
Adj R-squared 0.9994

Source: own calculation

Before interpreting OLS results, the VIF-Variance Inflation Factor test constructed from the R-squared obtained from auxiliary regression is imposed to define whether there is a multicollinearity problem. Multicollinearity can be explained as the high correlation relationship between independent variables. If VIF (1/(1-R2)) is higher than 10, it is accepted that there is multicollinearity.

4.4. Vif Results

According to the vif and correlation matrix results (Tables 7 &8), the current account balance and financial account balance coefficients are high, and the average of the independent variables' coefficient average is 22.72, which is more than 10. All these results prove that there is a multicollinearity problem

Table 7

Vif Results

Variable	**VIF**	**1/VIF**
Cur	62.58	0.015978
Fin	40.68	0.024585
Cap	2.48	0.403764
CPI	1.19	0.841699
Res	6.66	0.150168
Mean VIF	22.72	

Source: own calculation

For each independent variable, the point at which the calculated VIF values start to be less than 10 gives the best λ value that eliminates the multicollinearity problem. According to the results, 0,06 is the best λ value that eliminates the multicollinearity problem.

Table 8

Correlation Matrix

	Cur	Cap	Fin	Res	CPI
Cur	1.0000				
Cap	-0.7208	1.0000			
Fin	0.9856	-0.6894	1.0000		
Res	0.9046	-0.5777	0.8717	1.0000	
CPI	0.3356	-0.3836	0.3257	0.2565	1.0000

Source: own calculation

4.5. Ridge Regression Results

According to the results of ridge regression results that use 0,06 as the best λ value, the main hypothesis of the paper is approved, and it is revealed that a 1% increase in the level of corruption increases the level of NEO by % 0,00005 at a 90% confidence interval (Table 9). As mentioned in the data section, the paper CPI is the indicator that is used for corruption, and this index's methodology is '0' is the worst and '100' is the best. For this reason, the sign of the results of NEO and corruption is negative. In other words, an increase in the CPI (decrease in the level of corruption) causes a decrease in the level of NEO.

Table 9

Ridge Regression Results

NEO	Coef.	Std.Error	t	P>|t|	[95% Conf. Interval]
CPI	-.0000477	.0000271	-1.76	0.079	-.0001011 - 5.61e-06
Cap	-.9028247	.0197053	-45.82	0.000	-1.015582 -. 8640105
Fin	.938375	.0049759	188.62	0.000	.92877737 .9483762
Cur	-.9385699	.0047543	-197.42	0.000	-.9479346 -.9292053
Res	-.0357295	.0047416	-7.54	0.000	-.0450692 -.0263897
cons	.0014785	.0009214	1.60	0.110	-.0003363 .0032934

Number of obs 250
Prob Value 0.0000
R-squared 0.9986
Adj R-squared 0.9985
Root MSE 0.0071
AIC 0.0001
Source: own calculation

The relationship between NEO and the Current Account, Finance Account and Capital Account is parallel with the mathematical formulation of the NEO. A 1% increase in the level of the Finance Account causes a 0,938 points increase in NEO whereby. In contrast, a 1% increase in the capital account causes a 0,93% decrease, and a % 1 increase in NEO causes a 0,939% decrease in the current account. Lastly 1% increase in the Reserves leads to % 0,36 decrease in the level of NEO.

The R-squared is 99,94%, which is an expected result. After all, all explanatory variables arising from the formula of the net errors and omissions are included in the model's formula of the net errors and omissions. Although including all explanatory variables in the model allows us to achieve a high R^2 result, the RMSE (Root Mean Squared Error) test result, which is calculated by taking the square root of the average of the squared differences between the predicted and actual values (errors), has also been added to the findings. The obtained result of 0.0071 confirms the model's performance. Similarly, the obtained AIC result of 0.0001 is positively evaluated regarding the model's performance and simplicity (Table 9).

5. DISCUSSION

The effective management of the balance of payments is of great importance for government administrations due to its impact on other macroeconomic variables. Particularly for countries with chronic current account deficits, how they use and finance this deficit and the methods they employ become decisive factors in determining the sustainability of the deficit.

Essentially, when the current account deficit structure is properly structured and adequately financed, it does not exhibit a threatening framework. What is meant here is that if the trade surplus causing the current account deficit is aimed at technology transfer, and after a certain period, high-tech products can be produced and exported through this transfer, the structure will evolve positively. However, suppose the resulting current account deficit is primarily financed by foreign direct investments, particularly with its capacity to create employment. In that case, this will both sustain the current account deficit and provide the country with an opportunity for economic growth through increased employment. Although less positively impactful than foreign direct investments, another structural solution in financing the current account deficit is portfolio investments. Another aspect that makes foreign direct investments more advantageous compared to portfolio investments is that when a foreign investor decides to exit the country where they have invested, implementing this decision typically takes almost a year and sometimes even

longer. However, when a portfolio investor decides to exit, this can happen within a maximum of two days after the decision date. Given this situation, a country attracting foreign direct investment will have sufficient time to mitigate the exchange rate pressure that may arise after the decision to exit. However, current account financing models carried out using reserves or the net errors and omissions component, which consists of amounts with unknown sources, are unsustainable and palliative solutions for countries. Nevertheless, it is observed that some countries frequently use both methods.

When examining the history of the world economy, it becomes evident that countries have developed solutions to their macroeconomic problems by considering the dynamics of the relevant era. At this point, the process that leads countries to success begins with transparently and honestly identifying, defining, and acknowledging the problems. Countries that follow this approach have the potential to arrive at solutions in a relatively short time. However, those who deny their problems, conceal them from the public, and resort to palliative measures or, worse, corruption-based methods are unlikely to achieve a healthy economic structure in the long term.

6. CONCLUSION

The motivation for this study arises from the case of Turkiye, where NEO values are critically high whenever the current account deficit arises dramatically. The situation in Turkiye raises questions about which types of countries commonly use the financing method for the current account deficit with NEO. It also raises questions about whether countries with a high susceptibility to corruption use the net errors and omissions component as a balancer for the current account deficit. The presence of significant amounts in this account, which is primarily expected to record small amounts resulting from accounting errors, is intriguing in terms of examining the nature of this account of unknown sources.

With this motivation, 25 countries with the highest amount of NEO are chosen, and by imposing ridge regression, the relationship between NEO and corruption level is tested. According to the results, it is concluded that a 1% increase in the level of corruption increases the level of NEO by % 0,00005. Although the impact may seem low, it should be noted that corruption data is in index form. When checking the results of other net errors and omissions determinants, it is observed that a 1% increase in the level of the Finance Account causes a 0,938% increase in NEO. In contrast, a 1% increase in the capital account causes a 0,93% decrease, and a %1 increase in NEO causes a 0,939% decrease in the current account. Lastly 1% increase in the reserves leads to %0,36 decrease in the level of NEO.

With these results, it has been revealed that countries choosing to finance their current account deficits using the net errors and omissions component tend to have a high propensity for corruption. It is crucial for such countries to swiftly move towards generating structural solutions to this issue, as this will significantly enhance the reliability of their economies and make them more attractive to foreign investors. Furthermore, it should not be forgotten that the rampant spread of corruption culture leads to corruption adversely affecting the economy and many aspects of the respective country's citizens. To leave a country where future generations can live confidently, severe methods must be developed to combat corruption.

The next step for this research series will be measuring the impact of corruption on FDI and portfolio investments, approaching the subject from a bilateral perspective. Our motivation here is the assumption that countries unable to attract FDI and portfolio investments due to corruption may face a dilemma of covering their current account deficits through untraceable funds recorded under the net errors and omissions category.

REFERENCES

Adetiloye, K. A. (2012). Errors and Omissions and Unrecorded Capital Flows and Flight in Nigeria. International *Journal of Business and Social Science*, 3(3), 307-314. https://doi.org/10.30845/ijbss

Blomberg, G., Forss, L. ve Karlsson, I. (2003). Errors and Omissions in the Balance of Payments Statistics: A Problem. Sveriges *Riksbank Economic Review*, 2, 41-50. https://doi.org/10.2307/3439872

Ding, L. S. ve Tang, C. T. (2019). Sustainability of 'Net Errors and Omissions' of Balance of Payments With Global Results. *Labuan Bulletin of International Business & Finance*, 17(2), 1-7. https://doi.org/10.21315/lbibf.2019.17.2

Duffy, M. ve Renton, A. (1971). An Analysis of the U.K. Balancing Item. *International Economic Review*, 12(3), 448–464. https://doi.org/10.2307/2525357

Eggerstedt, H., Hall, R. B., & Van Wijnbergen, S. (1995). Measuring capital flight: a case study of Mexico. *World Development*, 23(2), 211-232. https://doi.org/10.1016/0305-750X(94)00123-G

Fausten, D. K. ve Brooks, R. D. (1996). The Balancing Item in Australia's Balance of Payments Accounts: An Impressionistic View. *Applied Economics*, 28(10), 1303-1311. https://doi.org/10.1080/000368496327831

Fausten, D. K., & Pickett, B. (2004). 'Errors & omissions' in the reporting of Australia's cross-border transactions. *Australian Economic Paper*, 43(1), 101−115. https://doi.org/10.1111/j.1467-8454.2004.00219.x

Freund, C. ve Spatafora, N. (2008). Remittances, Transaction Costs, and Informality. *Journal of Development Economics*, 86(2), 356-366. https://doi.org/10.1016/j.jdeveco.2007.09.002

IMF (1977). Balance of Payments Manual (4th Ed.). Washington: International Monetary Fund.

IMF (2009). Balance of Payments and International Investment Position Manual (6th Ed.).Washington: International Monetary Fund.

IQI, (2023). Institutional Quality Index, https://sites.google.com/site/institutional qualityindex/home. Hoerl AE. 1962. Applications of ridge analysis to regression problems. Chem Eng Prog. 58(3):54–59

Keşap, D. & Sandalcılar, A. R. (2021). Net hata ve noksan hesabı belirleyicilerinin analizi: Türkiye örneği. Uluslararası İktisadi ve İdari *İncelemeler Dergisi*, 32, 149-168. https://doi.org/10.18092/ulikidince.934498

Kristinsson, T.Ö. (2016). Net errors and omissions in balance of payments statistics, impacts, causes and effects. Master's Thesis, Universidade Nova de Lisboa, Portugal.

Krugman, P.R., Obstfeld, M., Melitz, M.J. (2017). Uluslararası İktisat Teori ve Politika. Palme yayıncılık. Ankara.

Le, Q.V. and Rishi, M. (2006). Corruption and capital flight: an empirical assessment. *International Economic Journal,* 20(4), 523-540. https://doi.org/10.1080/10168730601027161

Lin, M.Y., & Wang, H.H. (2009). What causes the volatility of the balancing item?. *Economics Bulletin*, 29(4), 2738−2748.

Mwangi, M., Njuguna, A., & Achoki, G. (2019). Relationship between corruption and capital flight in Kenya: 1998-2018. *International Journal of Research in Business and Social Science*, 8(5), 237-250. https://doi.org/10.20525/ijrbs.v8i5.318

Osei-Assibey, E., Domfeh, K. O., & Danquah, M. (2018). Corruption, institutions and capital flight: evidence from Sub-Saharan Africa. *Journal of Economic Studies*, 45(1), 59-76. https://doi.org/10.1108/JES-11-2016-0256

Şahin S. (2022). Net Errors and Omissions Account Overview: Analysis of Selected Countries (1980-2018). *Journal of Economic Policy Researches*, 9(1), 103–120. https://doi.org/10.26650/JEPR964338

Siranova, M., & Tiruneh, M. W. (2016). The determinants of errors and omissions in a small and open economy: The case of Slovakia (No. wp73).

Siranova, M., Tiruneh, M. W., & Fisera, B. (2021). Creating the Illicit Capital Flows Network in Europe – Do the Net Errors and Omissions Follow an Economic Pattern?. *International Review of Economics & Finance*, 71, 955-973. https://doi.org/10.1016/j.iref.2020.10.015

Tang, T. C. (2006). Japan's balancing item: do timing errors matters?. *Applied Economics Letters*, 13(2), 81−87. https://doi.org/10.1080/13504850500378718

Tang, T. C. (2017). New perspective on the 'net error and ommision' in balance of payment accounts: An empirical study in Australia. *Asian Academy of Management Journal of Accounting and Finance*, 13(2), 27–44. https://doi.org/10.21315/aamjaf2017.13.2.2

Tang, T. C., & Lau, E. P. H. (2008). An empirical investigation on sustainability of balancing item in Asian countries. *Applied Economics Letters*, 15(2), 117-123. https://doi.org/10.1080/13504850600721916

Taştan, S. (2015). Sustainability of balancing item of balance of payment for OECD countries: evidence from fourier unit root tests. *Theoretical and Applied Economics*, 22(3), 93-100.

Vuksic, G. (2009). Croatian balance of payments: Implications of net errors and omissions for economic policy. *Institut Za Javne Financije- Newsletter*, 41, 1−5.

Yılmaz, Ö. T. (n.d.). Türkiye'de Net Hata ve Noksan Hesabini Etkileyen Unsurlar, (Ed. Dr.Şahin Karabulut), Ampirik Yöntemlerle İktisadi ve Finansal Çözümlemeler.