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Governance, Economic Uncertainty, and Public Debt in Developing Countries: Evidence from Egypt

إثر الحوكمة وعدم اليقين الاقتصادي على الدين العام في البلدان النامية

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Abstract: The recent expansion of borrowing has raised significant concerns regarding the critical issue of debt in both developing and developed countries. Egypt is no exception, as it seeks debt sustainability that should not only be achievable but also tied to specific accomplishments within a defined time limit. Shifting the primary goal of the country to merely fulfilling its payment obligations can lead to ineffective debt management. This research aims to investigate the effects of governance and economic uncertainty on public debt in Egypt. The study employs Nonlinear Autoregressive Distributed Lag (NARDL) over the period from 1998 to 2023. The findings reveal that foreign direct investment (FDI) has a significant negative effect in the long run, while economic uncertainty has a significant positive effect in both the long run and the short run. Governance has a significant negative impact, and the risk indicator shows a significant positive effect in the short run only. The asymmetric effects of these results are confirmed by the NARDL model.

JEL classification : H63, D81, C33

Keywords : Public Debt, economic uncertainty, and governance

الملخص: أثارت زيادة معدلات الاقتراض في الفترة الأخيرة وخاصة في الدول النامية التي تتميز بهشاشة النظام الاقتصادي العديد من المخاوف بشأن قضية تخطى حجم المديونية عن المستوى الأمن. مصر ليست استثناءً من حيث السعي إلى تأمين الوفاء بالتزاماتها المختلفة وتحمل اعباء المديونية. ويأتي هذا متزامنا مع أهمية تحسين المؤشرات الاقتصادية الهيكلية مثل تحسين مستويات المعيشة،السيطرة على الضغوط التضخمية ،الحد من عجز الموازنة العامة للدولة وغيرها من التحديات. وبالتالي فان مجرد التركيز على ان يكون الهدف الأساسي للإدارة الاقتصادية هو الوفاء بالتزامات السداد يمكن أن يؤدي إلى إدارة غير فعالة لإدارة ثروات الدولة. ومن ثم يجب على الحكومة تطبيق قواعد الحوكمة الرشيدة وخاصة في ظل التقلبات الاقتصادية والجيوسياسية المعاصرة. في هذا السياق يهدف البحث إلى دراسة آثار الحوكمة وعدم اليقين الاقتصادي على الدين العام في مصر خلال الفترة من 1998 إلى 2023 مستخدما نموذج الانحدار الذاتي غير الخطي للفترات الابطاء الموزعة NARDL. وقد توصلت الدراسة الى أن عدم اليقين الاقتصادي كان له تأثير معنوي إيجابي على حجم المديونية خلال كلا من الأجل الطويل والقصير، بينما للحوكمة تأثير معنوي سلبي فقط في الاجل القصير. في الوقت الذي كان للاستثمار الأجنبي المباشر (FDI) تأثير معنوى سلبي على المدى الطويل.

1.Introduction

The recent expansion of borrowing has brought significant attention to the critical crisis of debt in both developing and developed countries. These consecutive crises have pushed the public debt-to-GDP ratio to unprecedented levels, presenting a growing challenge for developing nations, particularly in light of rising borrowing costs. Advanced economies hold the lion share of this debt, amounting to 112% of general government gross debt as a percentage of GDP, while emerging and developing economies stand at approximately 67% in 2023. Projections indicate that by 2028, the debt ratio for advanced economies will reach 116%, while that of emerging countries is expected to rise to 73%.

According to world bank debt statistics in 2024, there are 28 developing economies suffer from weak credit ratings and remain stuck in a debt trap as their average debt-to-GDP ratio was nearly 75 percent at the end of 2023, means 20 points greater than developing economy average , eleven of these 28 economies have defaulted since 2020 approaching the total of the previous two decades. Worth mentioning that these economies constitute only 5 percent of global output, so it could be a silent but moral crisis. The rapid tightening monetary policy by USA has forced a financial trouble for the developing economies pushing the cost of borrowing to increase over the past two years with interest rates twenty points above the global benchmark rate and more than nine times that for other developing economies. More sever situation there are thirty-one countries are already in debt substantial risk, one out of three developing economies is struggling with high debt in an environment of weak growth, steep borrowing costs, and a multitude of downside risks (WB, 2024).

Several studies support the idea that a higher level of debt affects not only capital accumulation but GDP growth as well through increased interest rates and higher future taxes [Barro 1979; Dotsey 1997]. Public debt has become not only an economic crisis but also a debatable political debatable topic. Higher government debt can lead to higher volatility as well as reduce future growth. Consequently, public debt undermines macroeconomic stability.

Recently there has been a growing consensus that effective governance is a crucial factor in tackling public debt managements. A sound implementation of good governance can help in terms of reducing the cost of borrowing, enhance the management of domestic debt market, and maintain financial system stability. Governance used as mediator in debt-growth nexus. Effective governments may enhance the public expenditure choices that can drive economic growth. Reinhart and Rogoff (2011) stressed the vital need for good governance for development.

Good governance, as seen by institutional quality, has been extensively investigated, and documented as a positive nexus between institutional quality and development (Valeriani and Peluso, 2011; Qamruzaman, 2021; Yang et al., 2021). Governance as provided by WGI (world governance indicators WB); government institutions play a significant part in economic growth. Some authors support the view of effective institutions in formulating long-term growth, showing that countries with weaker institutions face crises and stagnation (Acemoglu 2001). While other researchers (Kim 2017; Tarek 2017) demonstrate that public debt is a function of corruption and poor governance can be a direct reason behind high debt ratio. Governance indices include the rule of law, when it misused it can promote corruption and adversely affects the whole economic situation. Weak governance means higher debt and misallocation of government spending. According to Moshammer et al. (2016) debt accumulation not only by economic reasons but there are non-economic factors such as institutional quality can play a significant role in debt accumulation.

The recent global crises have underscored the importance of addressing uncertainty; the world must manage economic pace under elevated level of uncertainty. Public debt and uncertainty are interconnected issues that significantly impact economic stability and policymaking (Kumar & Baldacci, 2010). Understanding the relationship between public debt and uncertainty is crucial for policymakers, as it can have profound implications for macroeconomic stability and long-term prosperity. Research indicates that high levels of public debt can amplify the effects of uncertainty on economic performance, financial stability, and fiscal sustainability. Furthermore, uncertainty can also affect the dynamics of public debt by influencing borrowing costs, investor confidence, and the willingness of lenders to finance government deficits. To effectively navigate the challenges posed by public debt and uncertainty, policymakers must adopt a comprehensive and proactive approach. This includes implementing prudent fiscal policies to manage debt levels, enhancing transparency and accountability in public fiscal management, and promoting economic diversification and resilience.

Egypt is no exception; it seeks debt sustainability that should not only be sustainable but also bound to specific achievements within a defined period. Shifting the primary goal of the country to fulfil its payment obligations can lead to ineffective management of debt. It is crucial for Egypt to maintain its debt sustainability over the duration of debts. In this context, this paper seeks to explore the impact of governance, economic uncertainty on public debt in Egypt.

The study deploys NARDL model with using annual data during the period 1998 to 2023 due to the availability of the data. Most studies have addressed the impact of governance on economic growth, consequently, its effect on public debt as it will presented in the literature review. From this perspective, this research aims to fill the gap by examining the impact of uncertainty critical variable of current economic and geopolitical crisis.

The study reveals that foreign direct investment (FDI) has a significant negative effect in the long term. Economic uncertainty has a significant positive effect in both the long run and the short run. Governance has a significant negative impact, while the risk indicator has a significant positive effect only in the short run. The Nonlinear Autoregressive Distributed Lag (NARDL) model has confirmed the asymmetric effects of these results.

The research is divided into six folds; after an introduction, the rest of the study follows: section two reviews related literature and section three describes contemporary trends in public debts for Egypt and the world while section four outlines the econometric model approach and describes the used data. Section five discusses the empirical results and finally section six will end up with conclusion and recommendations.

2. Literature Review

Before delving into the relationship between public debt and the variables in a hand. A clear definition what is public debt, according to the IMF (2021) Gross debt that it consists of all obligations that require payment or payment of interest and/or principal by the debtor to the creditor on a later date. This includes debt obligations in the form of SDRs, currencies and deposits, debt securities, loans, insurance, pension and standard security schemes, and other accounts payable. Public debt worldwide has risen significantly over the last decades, recent cascading crises have triggered a sharp acceleration of this trend. Consequently, global public debt has increased more than fourfold since the year 2000, clearly outpacing global GDP.

, which tripled over the same period, developing countries accounted for nearly 30% of the total, with approximately 70% of that figure attributable to China, India, and Brazil (UNCTAD 2023). The next lines would review the correlation between public debt and governance, economic and growth, and uncertainty.

2.1. Governance and Public Debt

Inevitably the good institutional is a persistence factor for efficient allocation of resources. Several literatures tackled how governance vital as a determinant variable or an intermediate variable between growth- debt relationship.

In this context in *Abbas, et al., (2021)* study for 106 countries spanning from (1996 -2015), deploying GMM estimation technique, assets that governance mediates the link between debt and economic growth because public debt and governance have a complementary pattern, implementing good governance help countries to achieve better managing their public debt. As governance has six indicators in *Tarek & Ahmed (2017)* study of institution quality impact on public debt for 17 MENA countries using the system GMM method. three governance indicators asserted the positive relationship which are the Rule of Law, the Regulatory Quality Index, and the Political Stability and Violence. Same results confirmed by *Ali & Al Yahya (2019)* study that investigates the impact of governance on public debt growth between 1996 and 2015 for Arabian gulf countries using GLS random effects. The study came out that the six indices of governance except corruption control help the countries to lower their public debt in tandem with better governance indicators. Also, in *Manasseh et al. (2022)* investigated the relationships between governance and external debt volatility in Sub-Saharan Africa, using Dynamic GMM, the study asserted how governments can improve governance quality and enacting policies that support private sector expansion and lowering the external debt volatility. Not only good governance became a significant factor for developing countries, even in transition economies according to *Naguyen et al, (2021)* study of 27 transition countries for the period (2000–2018) , using OLS method, random effects, and two-step GMM methods, the research confirms the conventional consensus that reducing public expenditure and improving government revenue could lower the government debt .The key findings confirm that institutional quality has significantly impact on public debt. Weak governance in curbing corruption would leads to higher accumulation of public debt while enhancing the government effectiveness, effective rule of law. Sound accountability would improve debt management. The research push to convince policymakers of the importance of both fiscal policy and institutional quality in managing public debt. Some literature focused on the role of corruption as a major governance determinant, Kim et al, (2017) addresses the role of corruption between public debt and economic growth, deploying (OLS), fixed effects and the dynamic (GMM) models for seventy-seven countries from (1990 – 2014). The results show that corruption is statistically has significant impact on public debt. Which confirms the study hypothesis that the effect of public debt on economic growth is a function of corruption. Where public debt enhances economic growth within countries are highly transparent and lower level of corruption.

2.2. Public debt and Economic Growth

The conventional views of the debt-growth nexus that public debt stimulates aggregate demand in the short-run. Other theoretical views assert the negative relationship in the long-run through the crowding-out of private investments and, higher long-term interest rates, inflation, and taxes distortion (Elmendorf and Mankiw, 1999; Gale and Orszag, 2003; Kumar and Baldacci, 2010; Barro, 1995; Cochrane, 2011).

According to (Woo & Kumar, 2015) public debt has a favourable significant economic impact on economic growth. However, it might lead to debt crises that have been exacerbated by huge obligations, especially when it can be characterized by poorly designed debt structure, being vulnerable to any financial fluctuating financial market leading to lower nation's trustworthiness. The mismanagement of debt is crucial issues even when the macroeconomic policy is effective.

2.3. Uncertainty and Public Debt

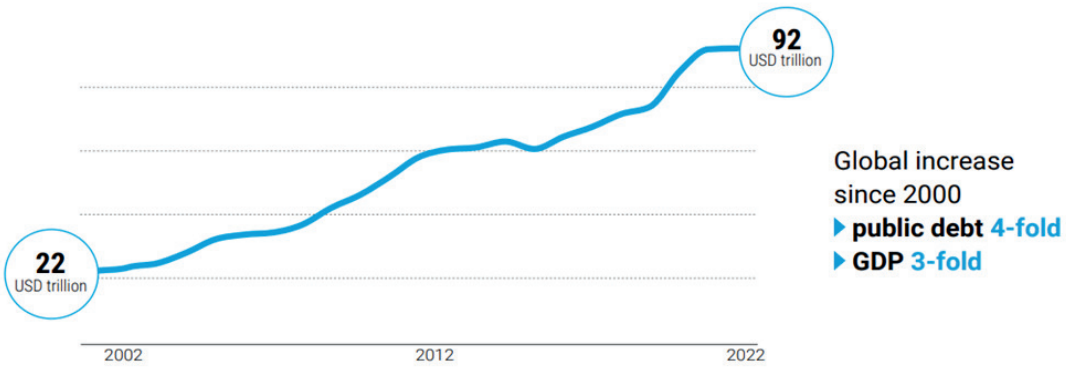
Public debt has long been a contentious and widely debated topic in the field of economics, and its relationship with uncertainty has gained increasing attention in recent years. Numerous studies have focused on the implications of elevated public debt levels and the associated uncertainty for economic growth, financial stability, and fiscal sustainability. Understanding the dynamics of public debt in conjunction with economic uncertainty is crucial for policymakers, as it can have significant ramifications for macroeconomic stability and long-term prosperity. The impact of uncertainty on public debt is a multifaceted issue. Uncertainty can have various effects on public debt; it can increase borrowing costs for governments as investors become wary of lending to a country due to uncertain economic conditions or political instability. Consequently, governments may be compelled to pay higher interest rates on their debt, leading to increased debt servicing costs and potentially creating a vicious cycle of rising debt and escalating borrowing costs. Kletzer (1997) argued that any change in policy concerning the future debt depends on the current shock to the economy. Alesina and Tabellini (1990) show that debt is misused because of the political instability. They provided a model of "positive theory of fiscal policy and debt in a democracy" with a claim that alternate regimes and political shifts also change the decision about major fiscal policies. Rossen (2017) assess the sustainability of public debt considering the effect of fiscal policy on output, as well as uncertainty in the model parameters and system dynamics. While Butkus et al.

(2022) examines uncertainty as a contributing factor to the relationship between public debt and economic growth. The study utilizes the neoclassical growth equation to assess financial risk, employing the interest rate as a financial proxy and the risk premium as an indicator of financial risk. The findings indicate that reduced uncertainty is associated with a more significant positive impact of debt on growth and a higher inflection point in the debt-growth relationship. Conversely, heightened uncertainty results in a diminished positive effect and a more pronounced negative impact of debt on growth.

3. The Evolution of Public Debt

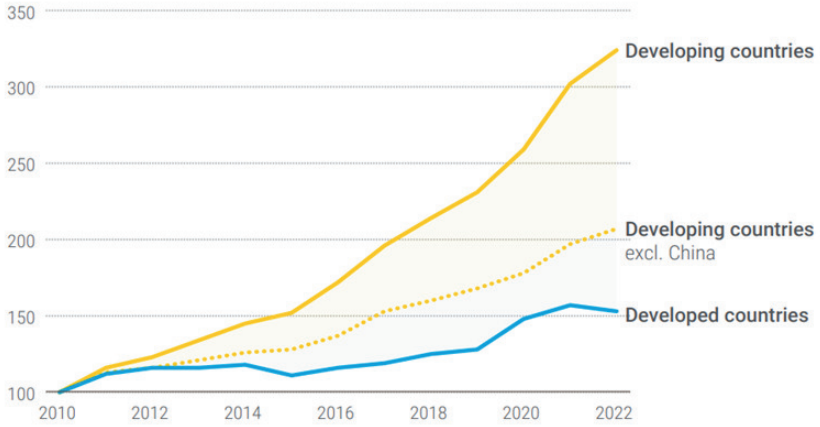
The evolution of global public debt has been driven by many economic and geopolitical factors, the current scene presents a complex interplay stituion of rising debt and concrete challenges. As figure (1) depicts the evolution of public debt that has increased by five times from 2002-2022 while the global gross domestic product has increased by only three times. which put heavily challenges on the global economy. According to the world economic outlook 2024 the global economy growth will have a sluggish increase from 3.1% in 2024 to 3.2% in 2025. The increase in debt is growing faster in developing countries, the recent crises narrowed the fiscal space of these countries, n an increase in debt is financed through foreign borrowing means an increase in interest rates is greater than under domestically financed debt as shows in figure (2). Consequently, the rise of the interest rate of payment the debt as depicted in figure (3) as it increased from 0.9% in 2010 to 1.5% in 2022 as a percentage of GDP. On the other hand, it represents about 6.9% of revenues from in 2022 from 4.8% of revenues in 2010.

Figure (1). The Evolution of Global Public debt (2000-2022) in USD million



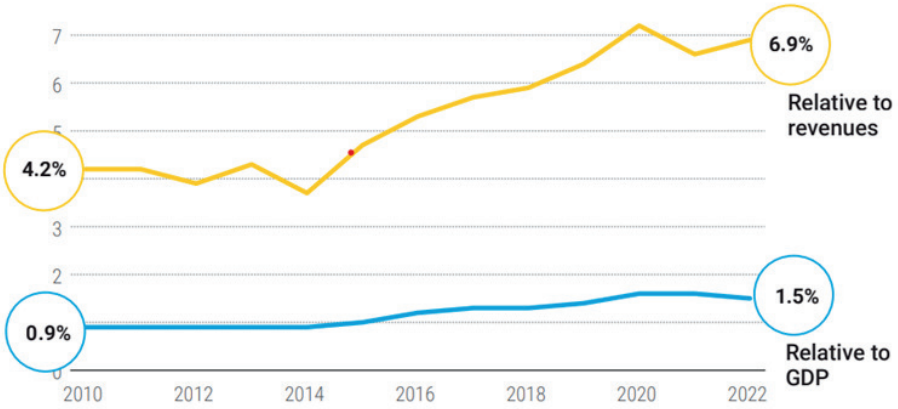
Source: UN Global Crisis Response Group calculations based on IMF World Economic Outlook (April 2023).
Note: Figures represent nominal values in current USD. Public debt refers to general government domestic and

Figure (2) Public debt is growing faster in the developing world.



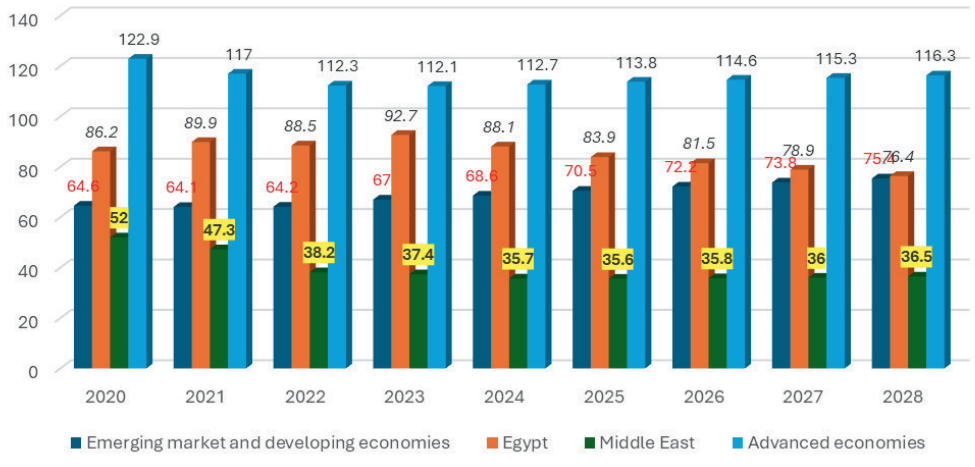
Source: UN Global Crisis Response Group calculations based on IMF World Economic Outlook (April 2023).

Figure (3) Net interest payments of developing countries (GDP%) and government revenues.



Sources: UN Global Crisis Response Group calculations, on IMF World Economic Outlook (April 2023).
Note: Median shares across developing countries.

Figure (4) The evolution of General Government Gross debt as %GDP (2020-2028)

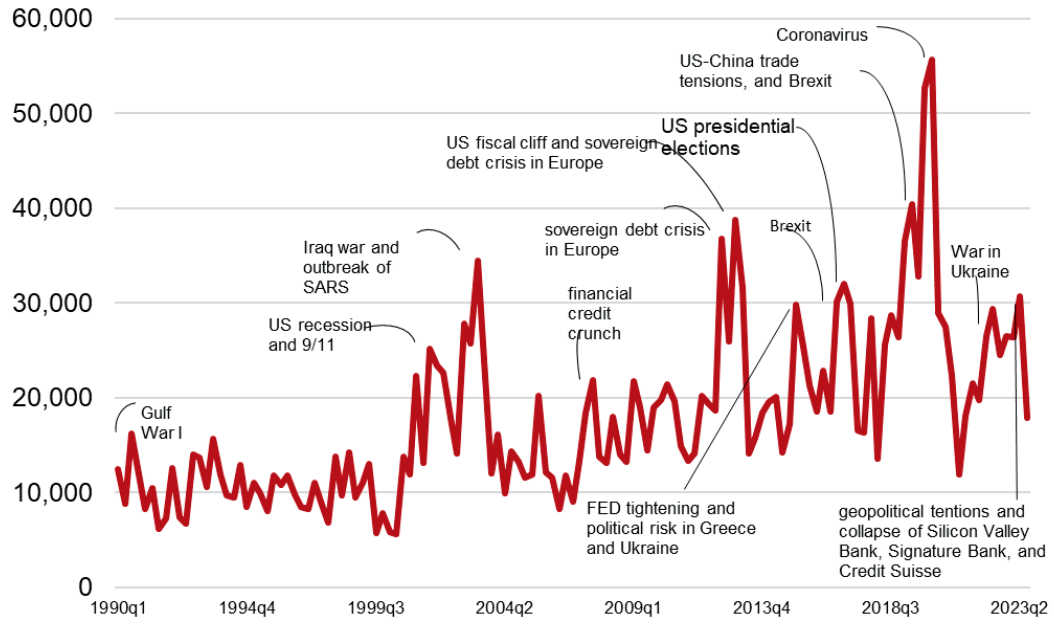


Source: IMF debt database

2.2. Public debt and Economic Growth

Comparing The evolution of Egypt's General Government Gross Debt as a percentage of GDP from 2020 to 2028 shows a significant upward trend even when it would decline in 2028 to amount to 76.4% of GDP. This upward trend is tandem with the emerging countries which reflects the prevailing situation of emerging countries, and the amount of debt expected for the coming years. The advanced economics keep their lion share of to amount to 116% in 2028 even it is less than the starting with 122% in 2020.Overall, Egypt is not an exception under the current global disruptions, global debt reflecting the ongoing efforts to manage fiscal challenges and stabilize the economy. The trajectory highlights the importance of structural reforms to enhance economic resilience and sustainability.

Figure (5) World Uncertainty Index (1990Q1 to 2023Q3)

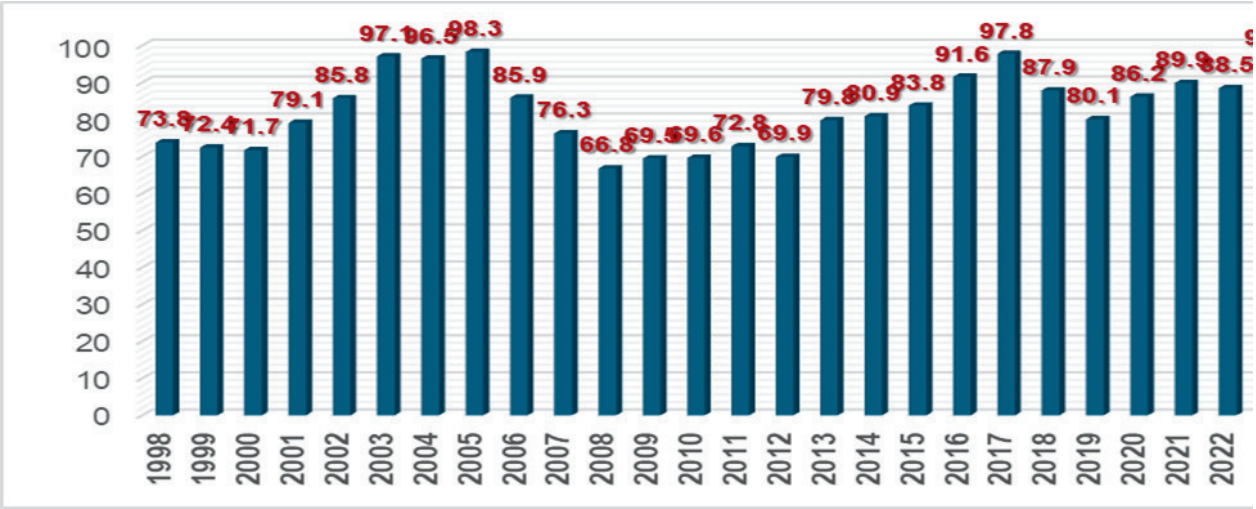


Source: Ahir, H, N Bloom, and D Furceri (2022), "World Uncertainty Index".

Figure (5) shows that world uncertainty index has significant changes and turnovers over the selected period, those changes are associated with global disturbances like economic crises or wars. Global uncertainty has been on the rise since approximately 2011, with spikes occurring during significant political and economic events. Recently uncertainty has plugged extensively affecting economic growth, global investment decisions, and global stability.

Figure (6) shows that level of public debt as a percentage of GDP for Egypt has significantly increase during the last years even it deceased from 97.8% in 2016 to 92.7% in 2022.

Figure (6) Evolution of public debt as a percentage of GDP in Egypt (1998-2022)



Source: IMF data mapper

On the other hand, discussing the impact of rising debt cannot be done without acknowledging the development of Foreign Direct Investment (FDI) as a source of foreign finance. Figure 7 illustrates the net flow of direct foreign investment as a percentage of GDP in Egypt during the study period. It is observed that FDI peaked in 2006 at 9.3%, then declined to a negative value in 2011 following the political disturbances that ensued after the 2011 revolution. Subsequently, it experienced a slight increase, reaching 2.4% in 2022.

Figure (7) Development of Foreign direct investment, net inflows (% of GDP) for Egypt

Source: World Bank data 2024

4. Data and Methodology

4.1. Data

To model the public debt, we consider not only macroeconomic fundamentals, but also each of uncertainty which captures both domestic and global risks, in addition to governance indicators which enriches information inside the model.

Table (1). Data and sources

Variable	Notation	Sources
Gov. debt	Debt as percentage of GDP	WDI
Governance	Gn	WGI-WB 1996
Economic Uncertainty	EU	WUI
FDI	F	WDI
ICRC	ICRC	International country risk guide dataset
Oil price	OP	Statista

4.2 Methodology

Firstly, the study explores nonstationary for the augmented variables. Unit roots in the time series were tested by two approaches in addition to the traditional Augmented Dickey Fuller test the nonlinear unit root test which applying tests with an endogenous structural break [E. Zivot, D.W.K. Andrews,2002]. P. Perron , 1992 developed a unit root test accounting for structural breaks like the ZA test. The null hypothesis is that the time series suffers from unit root then the coefficient is significantly different than zero. The Perron-Vogelsang (PV) test is based on the model:

$$z_t = c + \vartheta_1 z_{t-1} + \vartheta_2 z_{t-2} + \cdots + \vartheta_p z_{t-p} + \sum i \ = 1 r \gamma_i D_{i,t} + \epsilon_t \quad (1)$$

Where, is the underlying time series, c is the constant, , , ..., are coefficients for lagged of time series, is dummy variable takes the value one if the series involves structural break and zero otherwise, is coefficient for dummy variable, is the error term.

The study utilized Autoregressive Distributed Lag Model (ARDL) which can be used regardless integration level as it can includes time series integrated at degree zero or one (Engle and Granger, 1987; Hassler and Wolters, 2006). ARDL model takes the following form:

$$\Delta y_t = \beta_0 + \sum_{i=1}^{m} \beta_i \Delta y_{t-i} + \sum_{i=1}^{n} \theta_i \Delta x_{t-i} + \varphi_1 y_{t-1} + \varphi_2 x_{t-1} + \varepsilon_t \quad (2)$$

Where is the dependent variable, is the independent variables where and reflect the relationship over the long run, while and are coefficients over the short term. In addition, m and n reflect lag periods for dependent variable and independent variable, respectively.

We depend on Bound test to explore the long run relationship between the dependent and independent variables by using Fisher statistic and with depending on critical values which developed by Pesaran et. al. (2001), that depicts lower and upper critical values, then we cannot reject H0 which states there is no long run relationship if Fisher statistic is larger than the upper value.

To explore asymmetric effect of the effect over positive and negative changes which can be formulated as following (Shin et al. ,2014):

$$Y_t = \beta^+ X_t + \beta^- X_t + u_t \quad (3)$$

$$\Delta X_t = v_t$$

$$X_t^+ - \sum_{j=1}^{t} \Delta X_j^+ - \sum_{j=1}^{t} \max(\Delta X_j, 0),\ X_t^- - \sum_{j=1}^{t} \Delta X_j^- - \sum_{j=1}^{t} \min(\Delta X_j, 0) \quad (4)$$

5. Results

Table (2) shows that some of the variables are stationary in level such as government debt, economic uncertainty, FDI and governance, and other variables are stationary in first difference such as oil price and risk.

Table (2). Unit root results

	ADF		Break Selection: Minimize Dickey-Fuller test	
	Level	First difference	Level	First difference
GOV_DEBT	-2.7 (0.08) *	-3.56 (0.01) **	-4.1 (0.123)	-4.62 (0.03) **
ECUNC	-2.786 (0.07) *	-4.9 (0.00) ***	4.47 (0.04) **	-5.77 (0.00) ***
FDI	3.22 (0.03) **	-3.087 (0.04)	-4.6 (0.03) **	4.322 (0.07) *
GOV	-3.408 (0.01) **	-14.49 (0.00) **	-8.67 (0.00) ***	-15.7 (0.00) ***
OP	1.743 (0.399)	-4.6 (0.00) ***	-3.03 (0.669)	-6.128 (0.00) ***
RISKR	-1.62 (0.458)	-3.62 (0.01) *	-4.11 (0.3)	-4.637 (0.02) **

Sources: estimated by authors by using EViews.

Table (3) F-Bound test results

Test Statistic	Value	Signif.	I (0)	I (1)
			Asymptotic: n=1000	
F-statistic	5.764504	10%	2.08	3
		5%	2.39	3.38
		1%	3.06	4.15

Sources: estimated by researchers by using EViews.

Table (3) which depicts the results of bound test shows that there is long run relationship between the variables.

Table (4) shows that for the long run relationship, we can find that economic uncertainty has a positive significant effect on the debt, FDI has a negative significant effect while each of governance, risk and oil price has insignificant effect.

Regarding short run effect, we can find that change in governance has a negative significant effect, change in economic uncertainty, and change in risk has a positive impact. In addition, cointegration coefficient value is -0.26 and significant which implies that the variables move towards their equilibrium at a considerable rate.

Table (4). Results of short run and long run

Variable	Coefficient	t-Statistic	Prob.
C	-16.18659	-0.737891	0.477
GOV_DEBT (-1)	-0.260411	-2.451501	0.034**
GOV (-1)	16.15778	1.419240	0.186
ECUNC (-1)	0.492803	2.345881	0.0409*
RISKR (-1)	0.515253	1.666786	0.126
FDI**	-1.489317	-4.291564	0.001***
OP (-1)	0.097742	1.423498	0.185
D (GOV (-1))	-36.17108	-2.873249	0.0166**
D (GOV (-2))	-19.60307	-2.528265	0.03**
D(ECUNC)	0.804742	3.815171	0.003***
D(RISKR)	1.264364	2.249302	0.048**
D(OP)	-0.018098	-0.394077	0.70
CointEq (-1) *	-0.260411	-8.035076	0.00***

Sources: estimated by researchers by using EViews.

The Breusch–Godfrey test for testing the existence of serial correlation in the residuals. The null hypothesis states that there is no serial correlation while the alternative hypothesis that null hypothesis might be not correct. The table number (5) depicts that we fail to reject the null hypothesis as p-value = 0.102<0.05. therefore, residuals do not include any serial correlation.

The Breusch–Pagan test for homoskedasticity which testing if the residuals are suffering from any heteroskedasticity as the null hypothesis states that residuals are homoskedasticity. Table number (5) shows that we cannot reject the assumption of homoskedasticity.

Moreover, Ramsy test and Jarque-Berra test in table (5) state that the model does not suffer from any misspecification.

Table (5). Diagnostics test for ARDL model

Test	Statistics and probability
Jarque-Berra test	1.1 (0.57)
Heteroskedasticity Test: Breusch-Pagan-Godfrey	2.48 (0.088)
Breusch-Godfrey Serial Correlation LM Test:	5.17 (0.1023)
Ramsey Test	0.035778 (0.8542)

Sources: estimated by authors by using EViews.

NARDL results state that nonlinearity in the relationship as outlined in table (6). FDI positive changes have a negative significant effect where negative changes have insignificant effect. This implies that a positive change in FDI has negative effect on public debt where negative changes do not affect. Economics uncertainty's negative changes have negative impact where the positive changes insignificant.

Risk positive changes have positive impact while negative changes are not significant. This implies that increase the level of risk increases the level of public debt where decrease the risk level does not affect the public borrowing. Further, positive changes for Governance have a significant negative effect where negative changes have insignificant effect. Furthermore, Oil price positive shocks have positive significant effect where negative shocks are not significant. This implies that increase in the level of global oil price led to increase the domestic prices and therefore government subsidiaries for domestic petroleum products increase which push up the government borrowing.

Table (6) Results of nonlinear ARDL

	Coefficient	t-statistic	Standard deviation	Probability
FDI_POS	-1.566520	0.420893	-3.721897	0.0013*
FDI_NEG	-0.234069	1.274637	-0.183636	0.8561
ECUNC_POS	0.309830	0.235867	1.313581	0.2039
ECUNC_NEG	-1.133823	0.509129	-2.226986	0.0376*
RISKR_POS	4.533150	1.664756	2.723011	0.0145*
RISKR_NEG	1.297265	0.698260	1.857855	0.0806
GOV_POS	-49.85503	17.42902	-2.860461	0.0113*
GOV_NEG	-4.820437	14.80711	-0.325549	0.7490
OP_POS	0.770171	0.242454	3.176559	0.0131
OP_NEG	0.129977	0.157892	0.823207	0.4342

Sources: estimated by researchers by using EViews.

6. Conclusion and policy recommendations

The study emphasized the significance of prudent fiscal policies in managing public debt levels, enhancing transparency and accountability in public fiscal management, and promoting economic diversification and resilience. Excessive public debt burdens imply significant current and future economic, political, and social disturbances. This is because an increasing level of debt means high taxes, reduced government expenditures, and more pressure on the government. However, over the last three decades, crises have compelled developing countries to rely on debt as a source for financing their commitments. Unfortunately, in recent years, Egypt during the last years facing a great challenge from increasing the burden of public debt especially under exchange rate floating process crisis, public debt is a counted 88.1% in comparison to 67% in the other developing countries. From this perspective the research aims at to investigate the effects of governance, economic uncertainty, on public debt in Egypt. The study employs Autoregressive Distributed Lagged (ARDL) and Nonlinear Autoregressive Distributed Lagged (NARDL) during g the time (1996-2023). The findings highlight the importance of sustainable economic growth and addressing structural vulnerabilities to mitigate the adverse effects of uncertainty on public debt dynamics. The study also reveals that FDI has a significant negative effect over long; economic uncertainty has a significant positive effect over the long run and the short run, governance has a significant negative impact where the risk indicator has a significant positive effect over the short run only. Asymmetric effect of the results already confirmed by the NARDL model. Therefore, based on results they are some policy recommendations as following:

1. Improve the inflow of foreign direct investment (FDI) in absolute value and enhance its effectiveness in productive sectors, reducing the share of oil sector. A productive investment map supported by robust legal regulations is essential.
2. Having a hedge to economic uncertainty shocks, with a good management of public debt by enhancing the pace and quality of GDP.
3. Improve governance rules especially the government effectiveness, the rule of law, and reducing corruption to attract FDI and decrease public debt.
4. Working to control risk level in the economy which has a significant effect over the debt value.
5. Improve the collection of revenues and allocation of expenditure.
6. Well calculated borrowing management, especially the cost of borrowing whether at long or short run.
7. Enhance the quality of investments that create more opportunities and improve the standard of living,

Future studies could focus on applying similar approach on other developing countries or utilizing different nonlinear approaches as switching regression model or time-varying analysis. In addition, future studies must address the finance gap due to domestic factors.

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