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Nouhaila Zeroual, Mohammed Rachid Aasri

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Public Debt: Facilitator or barrier? A literature review of its impact on economic growth

Dette publique : facilitateur ou obstacle ? Une revue de la littérature sur son impact sur la croissance économique

Nouhaila ZEROUAL, (PhD student)

*Laboratory of economic competitiveness and managerial performance,
Faculty of Law, Economics and Social Sciences of Souissi
University Mohamed V of Rabat, Morocco*

Mohammed Rachid AASRI, (Full Professor)

*Laboratory of economic competitiveness and managerial performance,
Faculty of Law, Economics and Social Sciences of Souissi
University Mohamed V of Rabat, Morocco*

Correspondence address :	Faculté des Sciences Juridiques, Économiques et Sociales – Souissi Avenue Mohammed Ben Abdallah Ragraoui Al Irfane. BP 6430 Rabat
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Public debt: facilitator or barrier? A literature review of its impact on economic growth.

Abstract

The sharp rise of public debt over the past years has renewed the debate about its impact on economic growth. This article provides a review of the main theoretical and empirical perspectives, highlighting the Keynesian, classical and threshold-based approaches. While Keynesian studies emphasize the potential of public debt to stimulate growth when used to finance productive investments during downturns, classical view warns against the risks of excessive borrowing, including crowding out and fiscal instability. Threshold-based perspective, suggest a non-linear relationship, suggesting that debt supports growth at moderate levels but becomes harmful when certain limits are exceeded.

Empirical evidence from advances, emerging and low-income economies, including recent findings from Africa, the MENA region and Europe, shows that the impact of public debt on economic growth varies considerably, depending on internal and external factors such as institutional quality, fiscal policy frameworks and macroeconomic conditions. The often cited 90% debt-to-GDP ratio found by Reinhart and Rogoff, illustrates the importance of identifying critical levels at which debt starts impacting negatively growth. However, as the reviewed studies reveal, such thresholds are not universal and unique, their effects vary between countries, and depend on many factors. The findings suggest that public debt can support economic growth when managed prudently and used to finance productive investments, but can be harmful when mismanaged or accumulated.

Keywords: Public debt, Economic growth, Debt thresholds.

Classification JEL: H63

Paper type: Theoretical Research

1. Introduction

In recent years, the surge in public debt has caused intense debates among economists and policymakers in the world. With global public debt reaching unprecedented levels, understanding its implications for economic growth has never been more critical. As of the global public debt according to the IMF in the end of 2024, has reached US \$ 98 trillion, which represents 94% of global GDP, and according to the statistics, this ratio can easily reach 100% of the GDP by 2030. As of 2024, if we take the case of Morocco's public debt, its value was around 69% of GDP, which has been a gradual increase due to various economic challenges. As governments face the challenges of funding essential services and stimulating growth, the relationship between public debt and economic performance becomes increasingly important. In this context different economic theories which can be categorized into classical and Keynesian views, and empirical studies have been done. The results are very variable, which means the relationship may be positive, just like the fundamentals of the Keynesian economics, that suggests that public debt can stimulate growth, specifically in times of recession, by financing government spending, or like the studies done by other researchers as Barro (1990). The negative effect of public debt on economic growth is shown in the theories of the classical economics, according to whom high levels of public debt can crowd out private investment, and negatively impact growth, this theory is reinforced by the work of many researchers that claim the existence of a threshold above which public debt start having a negative impact on growth, in this case the famous 90% threshold done by Reinhart and Rogoff (2010) is the best known, there are also other thresholds determined by other researchers, who based their studies in different countries and time periods, from which can be cited, the 70% of GDP found by Kumar and Woo (2010), and the 60% to 90% found by Checherita-Westphal and Rother in the Euro Area, while Alshmmmary and al. (2020) found a common threshold of approximately 58% in the MENA region. These thresholds may not be adequate for all of the countries, for example in Japan in 2021, according to the OECD, a ratio of 246.6% of GDP was recorded, and no signs of default were observed.

The results of these studies are still contradictory, some found a positive effect of public debt on economic growth, like the work of Halilaj (2024) and Butkus and al. (2021), while the post Covid 19 report done by the IMF in 2022 called "Debt and growth: Implications for fiscal policy" emphasizes that debt used for productive investment can stimulate growth, but excessive debt levels may lead to higher interest rates and reduced fiscal space, or a totally negative relationship like the results found by Ikwuo and al. (2024).

Therefore, the purpose of this study is to clarify the lack of consensus due to the disagreement between the results of the various studies already done, also trying to synthesize these works may help the governments and institutions to have an overview of the most important findings, which can help in fixating different factors and fiscal policies that will influence the effectiveness of public debt in promoting growth, and that way promote sustainable economic growth.

This article aims to explore the multifaced and complex link between public debt and economic growth, a subject of growing importance in the context of persistent fiscal challenges.

While existing literature presents varied findings, notable gaps remain. This literature review aims to synthesize current research, identify key trends, and highlight areas for further investigations because it includes recent studies done on the field. The sections will first present the theoretical frameworks, second will analyze the empirical studies, and will be concluded with a discussion based on the analysis of the different findings.

2. Theoretical background

To understand the relationship between public debt and economic growth, the core theories that shape this debate should be explored. Public debt represents the general government debt, government guarantees, and central bank borrowing on behalf of the government, domestic and external (World Bank, 2022), while economic growth is generally referring to the overtime increase in a country's real Gross Domestic Product (GDP).

The relationship between these two variables has long been debated in the literature, with studies supporting both beneficial and adverse effects. This divergence is framed around three main perspectives, the Keynesian perspective, which sees public debt as a tool to support economic growth, the Classical theory, which warns against the long-term economic risks of high levels of public debt, including crowding out effect and fiscal instability, and the theory of thresholds or non-linear theory, which introduces that the relationship between public debt and economic growth is not uniform, but shifts beyond a certain debt threshold. Each framework offers a unique perspective of the effect of public debt on economic growth, combined they shape the conceptual foundation for the literature.

The Keynesian theory considers public debt as a potentially beneficial tool for stimulating economic growth, especially during periods of economic recession and insufficient aggregate demand. Based on the foundational principles of John Maynard Keynes (1936), this perspective argues that during economic downturns, the private sector chooses to minimize its investment and consumption, which leads to a contraction in economic activity and rising unemployment levels. Under these circumstances, the government is expected to encourage the increase of public expenditure to compensate for the decline in private sector demand. In other ways, when tax revenues are not sufficient to finance this spending, public debt becomes an important and necessary instrument to implement expansionary fiscal policy. The main idea is that government expenditure based on borrowing can boost aggregate demand, improve employment levels, and stimulate economic activity. This mechanism, conducted by the fiscal multiplier effect, stipulates that a primary increase in public spending circulates through the economy, which leads to an increase in consumption and investment. Most importantly, public debt is not viewed as a harmful tool, on the contrary, it is considered as a strategic way to restore economic growth, an essential driver for recovery and stability, particularly when oriented toward productive public investments, such as infrastructure, education and innovation.

Contrary to the Keynesian perspective, the classical economics maintain a more conservative view on public debt. This approach focuses on the idea that markets are in nature self-regulating and that the intervention of the government specifically through debt, risks to disrupt investment behavior and lead to the creation of inefficiencies in the market system. A central concern within the classical framework is the crowding out effect, which stipulates that increased public debt leads to higher interest rates, discouraging private sector borrowing and investment. As presented by Baldacci and Kumar (2010), an increase in government debt can put the private investors in a situation of higher borrowing costs, potentially reducing private investment and weakening long-term productive capacity. Another issue highlighted by the classical school is the fact that government debt accumulated today imposes repayment obligations on future generations, effectively limiting their capacity to finance essential services and investments. Continuous fiscal deficits are also considered a source of macroeconomic instability, as they may weaken investor confidence, increase inflationary pressures, and enhance the risk of sovereign default or debt overhang (Panizza and Presbierro, 2013). This perspective views public debt as a financial burden and a limitation on future economic growth, especially when it is oriented toward consumption instead of capital formation.

A third and more complex theoretical perspective is established by the non-linear or threshold-based approach, which argues that the relationship between public debt and economic growth is not unidirectional, it is not purely beneficial or harmful, on the contrary its effect debt varies

depending on its level. According to this approach, at low or moderate levels, public debt can support economic growth by orienting it towards the financing of investments or by supporting demand in economic downturns. Nevertheless, beyond a certain threshold, which means a certain debt to GDP ratio, the positive effects of debt start to weaken and can eventually reverse. In that way, high debt levels can lead to rising interest payments, crowd out essential public spending, decline market confidence, and elevate the exposure to financial instability. In this context, the main idea is the existence of critical debt levels, specific debt to GDP ratios, beyond which the relationship between debt and growth becomes unfavorable. The emergence of this theory can be attributed to the influential contribution of Reinhart and Rogoff (2010). In their well-known paper titled “Growth in a time of debt”, they found a 90% debt to GDP threshold, in other words, they suggested that growth rates decrease severely in advanced economies once debt surpasses this threshold. The non-linear theory suggests that public debt affects growth differently depending on its level.

Combined, these three theoretical approaches provide a nuanced understanding of the complex relationship between public debt and economic growth. The Keynesian view highlights the positive role of public debt especially during economic downturns, the classical approach cautious against the crowding out effect and the long-term inefficiencies, and the non-linear theory introduces thresholds above which debt become harmful. Combined together, they offer a multidimensional base for interpreting the empirical evidence and structuring the literature review that follows.

3. Method

This article adopts a narrative integrative literature review, providing an analytical synthesis of existing theoretical and empirical evidence. The purpose is not to quantify findings but to provide a structured synthesis of the theoretical perspectives, including the Keynesian, classical and nonlinear theories, and targeted, focused and recent empirical studies across various geographical, economical and institutional contexts. The selection of literature was based on purposive and thematic sampling, with an emphasis on the most recent and relevant scholarly contributions. Priority was given to articles published in peer-reviewed journals and working papers released by reputable economic institutions such as the IMF, World Bank, and national central banks. Studies were also chosen for their relevance across different geographic contexts, incorporating findings from both developed and emerging economies to capture the diversity of fiscal and macroeconomic environments. The aim was not to produce statistically general results, but to cover enough key ideas and theories to fully understand the topic, ensuring that the full range of conceptual debates and analytical perspectives was represented. The literature was sourced from recognized academic databases including Scopus (Elsevier), Web of Science, and institutional repositories. The analysis was structured around the core theoretical paradigms and enriched with contextual variables such as institutional quality, fiscal policy design, and debt management practices to better understand the conditions under which public debt may either support or hinder economic growth.

4. Literature review:

In addition to the primary exploration of the theories, a body of empirical studies have investigated the effects of public debt on economic growth. This section reviews most recent and influential contributions, focusing on their methodologies, contextual relevance and findings, while highlighting the diversity of findings and methodological approaches.

Keynesian economics: Supporting debt as a driver of growth

Several empirical studies support the Keynesian perspective, highlighting the potential positive impact of public debt when used for productive investment. Auerbach and Gorodnichenko (2012), demonstrate by examining 20 developed countries and using a regime-switching SVAR model, that government borrowing for public investment can generate significant positive fiscal multipliers, especially during periods of economic downturn. This suggests that well-targeted public spending can stimulate growth in challenging times.

Similarly, Barro (1990), argues that public debt can promote long-term economic growth when it is directed toward productive investments in areas such as infrastructure, education, and technology, which strengthen the economy's future capacity for growth.

Therefore Checherita-Westphal and Rother (2012) choose to establish their study on twelve euro area countries for a period of 40 years provide empirical evidence that support the fact that moderate levels of public debt can be beneficial, and they were more selective in choosing the investments in infrastructure and human capital to be more productive, they find that while high levels of public debt can be harmful, there are thresholds below which government debt can positively contribute to growth. Their research highlights the importance of fiscal discipline and the efficient allocation of resources.

On the other hand, the post Covid 19 reports of the International Monetary Fund (IMF) in 2022, where a local projection method to a new dataset of debt surges in 190 countries between 1970 and 2020, indicated that public debt can stimulate growth if it finances productive public investments. They emphasize that the quality of spending and the broader economic context are critical for ensuring that debt contributes positively to growth. Their findings underscore the need for strategic fiscal policies that prioritize growth-enhancing investments. In other words, one of the reports called “Debt and Growth: Implications for Fiscal Policy”, explains while the COVID- 19 pandemic led to a spike in public debt, its impact on growth will depend on how effectively governments use this debt for recovery.

Abate (2023) used a different empirical method to explore the link. He used the nonlinear ADRL and multiple thresholds nonlinear models over the period 1982-2018, and found that in Ethiopia, a significant positive shock to public debt resulted in higher economic growth, reinforcing the idea that debt- financed government spending can act as an effective stimulus, particularly during times of economic distress. His study concluded that large increases in public debt led to beneficial outcomes, while smaller or negative shocks to debt had minimal effects.

Similarly, Halilaj (2024) analyzed the impact of public debt on economic growth in Kosovo, by using the Vector Error Correction Model (VECM), and confirmed that, when managed prudently, public debt can enhance economic performance. Halilaj emphasizes that for smaller economies, debt-financed investments, especially in infrastructure and public services, can stimulate growth by increasing aggregate demand and encouraging private sector activity. This particular point of view, underscores the Keynesian view that, under the right conditions, public debt can be a critical engine for economic development.

This cautionary note resonates with a study titled “Public Debt and Economic Growth in Nigeria” (2024), which stresses that poorly managed debt, especially when funds are not directed toward productive uses, can lead to unsustainable financial conditions.

Similarly, Ehikioya and al. (2020) analyzed the role of external debt in 43 African nations from 2001 to 2018, by using the Johansen Cointegration test and system Generalised Method of Moments (sysGMM). They found that when external debt was used for infrastructure development, it led to long-term economic growth. However, the benefits were diminished when debt was misappropriated, reinforcing the importance of using debt wisely to ensure positive outcomes.

For the case of Morocco, Oubaali (2023) studied the effects of public debt on GDP for the period from 1981 to 2014, and used the VAR and VECM models. The results show that both internal and external debt positively influence economic growth, public debt is not an obstacle to the development of the economy.

The critical perspective: High debt as a barrier to growth

Contrasting sharply with the Keynesian perspective, a significant number of studies documents the negative impact of public debt on economic growth. Reinhart and Rogoff (2010) provided seminal insights in their famous study, “Growth in a time of debt”, where they found that countries with public debt levels exceeding 90% of GDP experienced significantly slower economic growth. Their analysis of historical data of 44 economies over a period of 2 decades, suggested that growth rates decline significantly when debt crosses this threshold, going from an average of approximately 3.5% for countries below the threshold to about 1% for those above it.

Their findings opened a very severe debate between economists, starting particularly with Minea and Parent (2010), who criticized sharply their results, by describing them as biased due to the period and countries chosen. In 2013, Reinhart and Rogoff did another study, in which they cover a longer period of time, from 1800 to 2011 and correct their initial results. They found that the average growth rate is 2.4% for countries with a high level of public debt against 3.5% for those with a ratio less than 90%.

Panizza and Presbitero (2013) must also be cited, they used an Instrumental Variable (IV) approach to examine the impact of public debt for OECD countries, and concluded that high public debt tends to negatively affect economic growth, particularly in developing countries. They emphasized that the negative impacts of debt are compounded by factors such as limited access to financial markets and weaker institutional frameworks, which hinder effective debt management and investment. Similarly, Cecchetti and al. (2011), worked on a sample of 18 OECD countries, and find that an increase in public debt by 10 percentage-point, corresponds to a decline of approximately 18 basis points in future GDP growth.

This study goes hand in hand with the work of Kumar and Woo (2010), which concluded by analyzing a panel of 19 advanced and emerging economies for a period from 1970 to 2007, that high levels of public debt significantly hinder economic growth, especially in advanced economies. Their analysis showed that beyond certain debt thresholds—around 70% of GDP—the negative impact on growth becomes more clearer due to higher borrowing costs and less fiscal space for essential investments.

Baldacci and Kumar (2010), by using panel data from 31 advanced and emerging economies for a period of 28 years, from 1980 to 2008, they highlighted the adverse effects of excessive public debt, they argued that high debt levels could increase in long-term interest rates, which discourage private investment and slows down economic growth. They also noted that excessive debt can limit the government's capacity to invest in essential growth areas, which can be creating a cycle of stagnation.

In the case of South Africa, studied by Mhlaba and Phiri (2019), employed the ARDL model to study the long-term and short-term effects of public debt on economic growth in South Africa for a period between 2002: Q1 and 2016: Q4. They showed that public debt consistently harmed economic growth, with an even more pronounced effect in the post-global financial crisis period.

Moreover, Onafowora and Owoye (2019) explored the macroeconomic effects of public debt in Nigeria from 1970 to 2014 using a structural Vector Autoregression (SVAR) model. Their results indicated that public debt's negative impact on growth can be mediated through rising long-term interest rates. As governments borrow more, they push up interest rates, crowding out private investment.

For Morocco, Achibane (2021), analyzed the effect of the country's total government debt on economic growth, by using an ARDL model. He found that government debt has a significant negative effect on short-term growth, an increase in total government debt of 1% of GDP is associated with a 0,62% decrease in growth in the short run. In the long run, the negative impact of public debt on growth persists, it is found that an increase in total government debt of 1% of GDP is linked to a decrease of 0,4% in growth.

A non-linear perspective: Thresholds and context dependency

An emerging body of economic studies shows that the relationship between public debt and economic growth is non-linear, characterized by the effects of the threshold which depends on its turn on country-specific factors and the time period under consideration.

Reinhart and Rogoff (2010) were among the first authors to bring great attention to this idea, identifying a threshold of 90% of GDP, beyond which economic growth tends to slow down significantly. They achieved this result by using a descriptive historical analysis of 44 countries over approximately 200 years, rather than employing formal econometric methods.

Their findings, opened a very large debate and critics, especially by Minea and Parent (2012), who explored the relevance of the 90% threshold. Their critic is based on the threshold not being statistically estimated, which may bias the results, and also the fact that they did neglect the country-specific characteristics, such as the institutional, macroeconomic and structural differences, this led to applying a uniform threshold for all countries. For those reasons they used advanced econometric methods, and found a threshold of 115% of GDP. Also, Égert (2015), used a variant of Reinhart and Rogoff data set, to test the 90% debt threshold. They elaborated empirical evidence that suggests that the threshold is not a magic ratio, the debt limit may be lower and the nonlinearity can vary across samples and the specifications of the model. In 2013, Reinhart and Rogoff, conducted another study covering a longer period of time from 1800 to 2011, to correct their initial results. They confirmed the general idea that high debt is associated with slower growth, and also clarified that the 90% threshold is illustrative rather than definitive, they rejected the notion of a universal threshold and that the threshold is context-dependent.

Other researchers have identified lower thresholds, for instance, Kumar and Woo (2010) estimated that negative growth effects appear when debt exceeds approximately 70% of GDP and demonstrated that every 10-percentage-point increase in the debt-to-GDP ratio reduces GDP growth by 0.2 percentage points annually.

Checherita-Westphal and Rother (2012) found similar results for the Eurozone, identifying a threshold between 70% and 80% of GDP, they applied to the study of a panel of euro area countries for a period of 40 years.

Baum, Chechrita-Westphal and Rother (2013) added further nuance by showing that debt has a positive impact on growth when below 67% of GDP, no clear effect around this level, and negative impacts beyond 95%. They used the dynamic threshold panel model to achieve the results, using data from twelve-euro area countries from 1990 to 2010.

Baldacci and Kumar (2010) also found that debt levels above 80% of GDP significantly harm growth, mostly due to reduced public investment and increased financial instability, they took into account a various number of country-specific factors for a panel of 31 advanced and emerging market economies over the period 1980- 2008.

The results of studies show that thresholds differ across region and economic conditions. For instance, an IMF report (2022) projected that public debt in some countries, such as those with low debt levels, may not exceed a 40% debt-to-GDP ratio.

Cecchetti and al. (2011), used five-year overlapping growth episodes for 18 OECD countries over the period 1980 to 2006, and found a threshold of 85%, beyond this level of debt becomes a burden to economic growth.

Focusing more on the European zone, other studies employed different methods and achieved other results. Such as Mencinger and al. (2014), which examined the short-term effect of public debt on growth in a panel of 25 EU member states. They divided the countries into “old” members (1980 to 2010) and new members (1995 to 2010). The results show the existence of a non-linear impact of public debt on economic growth, insisting on the fact that for the old member states the threshold beyond which debt will start its negative impact vary between 80 and 94%, although for new members the debt-to-GDP ratio is lower, varying between 53% and 54%.

Bilan and Inhatov (2015) confirmed the non-linear relationship with a bigger panel of European countries that gathers 33 countries (28 EU members and 5 candidates), for a period from 1990 to 2011. While the non-linearity is verified, the threshold is different, varying between 45% to 55% of GDP, and mentioning that the threshold was lower for less developed countries like Romania than for more developed ones.

In the same year, Dinca and Dinca employed time-fixed effects regression to specify the debt-to-GDP ratio of 11 former communist EU member countries from 1999 to 2010. The results confirmed the strong impact of public debt on economic growth, with a threshold of 50% of GDP.

More recently, Petkovski, Stojkov and Kjosevski (2024), examined the relationship between the two variables in 11 EU new member countries (NMS) during a period from 2000 to 2021. The findings suggest that government debt has a positive impact on growth until reaching a debt-to-GDP ratio between 58,5% and 73,5%.

In the European region, some of the studies done of the country of Kosovo presented important results using different methods. For instance, Bajrami and al. (2020) used the VAR (Vector Autoregression) model to study debt’s impact on economic growth in Kosovo for the period of 2008 to 2018. The findings suggested that Kosovo tends to achieve higher growth rates when the debt-to-GDP ratio is situated around 10% and 30%. Meanwhile Beha (2024), used the generalized method of moments (GMM) by employing quarterly data from 2008: Q1 to 2022: Q4, and indicated the existence of a debt-to-GDP threshold is between 27,75% and 36,2%.

To these findings can be added, various studies examining the relationship between public debt and economic growth within the MENA region and other African countries. For instance, Daher Alshmmary and al. (2024) applied the threshold estimation technique for 20 Middle East and North Africa (MENA) economies from 1990 to 2016. They found that the effect of public debt on economic growth is significant and positive when the debt-to-GDP ratio is lower than 58%, they also emphasized the importance of policymakers being more prudent when they establish a policy related to debt issues. Another study established the same year (2024) by Alsamara, Mrabet and Mimouni, who used the CS-ARDL model on a sample of 14 MENA region members over a period 1980-2021, the countries were divided into oil and non-oil countries. The results showed that the debt threshold varies between 46% to 69% for oil countries and a threshold of 74% to 81% for non-oil countries. Omrane and al. (2017) established a study only on 4 MENA countries including Morocco, by using a panel threshold regression for the period 1970 to 2010, and found a debt-to-GDP ratio of 39,5%. Meanwhile, Khanfir (2019) used the same panel of 4 MENA countries (Morocco, Tunisia, Egypt, Algeria) and also the same econometric method, but a different time laps 2003-2012, and found a slightly similar result, which is 42% of GDP.

For other African economies, many studies have found valuable insights. For instance, Benayed and al. (2015), found a debt-to-GDP ratio of 47,31% for a panel of 10 African countries from 1981 to 2010, by using a panel threshold approach proposed by Hansen (1999).

More country-specific studies on Africa showed different or slightly similar results. Chala Amante Abate (2023), examined the impact of public debt on economic growth for Ethiopia by using a nonlinear ARDL and multiple thresholds nonlinear ARDL models for the period from

1982 to 2018. The results reveal a threshold of 66,75% of GDP or 36,27% of GNI, beyond these debt levels, economic growth is negatively impacted.

Panizza and Presbiero (2013) emphasize that these variations result from differences in institutional quality, economic structure, and macroeconomic stability, showing that there is no one-size-fits-all threshold.

To present a clearer overview of the various findings, the following table summarizes a number of empirical studies on the relationship between public debt and economic growth. The studies cover different countries, time periods and methodological approaches. Presenting the findings highlights the diversity of results, ranging from positive effects, to negative consequences and non-linear threshold dynamics.

Table 1: Summary table of empirical research

Authors	Country/Region	Period	Method	Findings
Auerbach and Gorodnichenko (2012)	20 developed countries	1985–2010	Regime-switching SVAR	Public debt purchased for investment generates positive multipliers, especially during downturns.
Abate (2023)	Ethiopia	1982–2018	Nonlinear ARDL, threshold models	Positive debt shocks boosts growth, large increases yield stronger effects. Threshold matters: beyond 66.75% of GDP or 36.27% of GNI, growth turns negative.
Halilaj (2024)	Kosovo	2000–2020	VECM	Prudently managed debt, and debt-financed investment can strengthen economic growth.
Oubaali (2023)	Morocco	1981–2014	VAR, VECM	Public debt (internal and external), positively influence economic growth.
Panizza & Presbiero (2013)	OECD countries	1970–2000	Instrumental Variables (IV)	High debt levels are associated with slower growth, especially in developing countries with weaker governance.
Mhlaba & Phiri (2019)	South Africa	2002Q1–2016Q4	ARDL	Public debt consistently harms growth, particularly after the global financial crisis.
Onafowora & Owoye (2019)	Nigeria	1970–2014	SVAR	Debt increases long-term interest rates, crowds out private investment and reduces growth.
Achibane (2021)	Morocco	1981–2014	ARDL	1% rise in debt-to-GDP ratio reduces growth by –0.62% (short run) and –0.40% (long run).
Bilan & Ihnatov (2015)	33 European countries	1990–2011	Panel threshold model	Threshold between 45 and 55%, the threshold is lower for less developed countries.
Bajrami et al. (2020)	Kosovo	2008–2018	VAR	Economic growth is higher when debt/GDP is between 10 and 30%.
Alsamara et al. (2024)	14 MENA (oil & non-oil countries)	1980–2021	CS-ARDL	Threshold between 46 and 69% (oil), between 74 and 81% (non-oil).

Omrane et al. (2017)	4 MENA countries (Tunisia, Turkey, Morocco, Egypt)	1970–2010	Panel threshold regression	Threshold of 39.5% of GDP.
Khanfir (2019)	4 MENA countries (Tunisia, Turkey, Morocco, Egypt)	2003–2012	Panel threshold regression	Threshold of 42% of GDP.

Source : Authors

5. Debate and discussion

In today's global economic context, economic growth remains fragile after the persistent inflationary pressures, increase interest rates and geopolitical tensions that continue to disrupt trade and investment flows. The levels of public debt that are already elevated by expansive fiscal measures during the pandemic, have reached record highs across advanced and emerging economies. According to the IMF (2024), global public debt reached 93% of GDP in 2023, with developing and low-income economies experiencing increased amount of debt-servicing due to more restrictive global financial conditions. These situations intensify the relevance of public debt and growth debate, as policy-makers confront the challenge of stimulating economic growth while ensuring long-run fiscal sustainability.

The divergent findings in the literature reveals that the influence of public debt on economic growth is complex, and cannot be characterized as uniformly positive or negative, rather it should be context-dependent and is influenced by multiple factors, such as the magnitude of debt, institutional frameworks and government quality, and the macroeconomic circumstances. According to the Keynesian perspective, public debt is an important and vital tool for fostering economic recovery during economic downturns. This principle is evident in light of recent crises, including the global financial crisis and the COVID-19 pandemic, where governments applied to large-scale fiscal interventions to stimulate aggregate demand and promote growth. The study done by the IMF in 2022, on a sample of 190 countries for a period of 50 years, goes hand in hand with this vision.

In this context, studies by Auerbach and Gorodnichenko (2012) who worked on 20 developed countries and Abate (2023) who focused on Ethiopia, confirm that in periods of economic stress, the debt that is financed by public investment in infrastructure, health and education can lead to a strong multiplier effect, which boosts demand and encourages private investment. However, this positive relationship is highly dependent on the efficient allocation of borrowed funds. Mismanagement or use of debt for recurrent expenditures instead of productive investment not only limits the growth potential but also leads to long-term fiscal vulnerability, which illustrates the classical view.

The different studies show that the result may depend on the characteristics chosen for the samples, such as the region, period of study and method used. For instance, Auerbach and Gorodnichenko (2012) focused on 20 developed countries using a SVAR model and found a positive link between public debt and economic growth, while Baldacci and Kumar (2010) analyzed 31 advanced and emerging economies and used a system GMM estimation, and found a negative impact of debt on economic growth.

For the case of Africa, Ehikioya (2020) elaborated the research on 43 African nations for 2001-2018, and found that economic growth is impacted positively by public debt. However, specific country studies also achieved divergent results, such as the studies done for African countries. For example, Abate (2023) focused on Ethiopia for a period from 1982 to 2018, used a nonlinear ARDL and multiple thresholds nonlinear models and found a positive link, while Onafowora and Owoye (2019) focused on Nigeria for a period going from 1970 to 2014 and used the SVAR

model, to find a negative link. This study goes along with Mhlaba and Phiri (2019) who found the same result for South Africa by using the ARDL method. For the case of Morocco, Oubaali (2023) and Achibane (2021) used different econometric methods and achieved contradictory results, Oubaali (2023) found a positive relationship between government debt and growth while Achibane (2021) found a negative one.

The Nigerian and African studies (2020–2024) highlight this issue, demonstrating that debt without strategic planning and oversight can become a source of financial instability rather than growth. In this regard, the cautionary stance taken by Reinhart and Rogoff (2010), Kumar and Woo (2010), and others cannot be ignored. High debt levels increase borrowing costs, crowd out private sector investment, and reduce the government's ability to respond to future shocks, leading to a downward spiral of stagnation or even economic contraction.

Another important takeaway from the literature is the growing consensus around non-linear relationships and debt thresholds. What becomes evident is that the effect of public debt is not linear but follows a tipping-point dynamic. Below certain thresholds, debt can support growth, while beyond these points, the negative consequences become more pronounced. These thresholds differ considerably between developed and developing countries and even among smaller, open economies. For example, while developed economies may sustain debt levels around 70–90% of GDP without severe harm, like the 80% debt-to-GDP ratio achieved by Baldacci and Kumar (2010), who focused on advanced and emerging economies, but for smaller or less stable economies, like Kosovo or some African countries, they may experience negative effects at much lower thresholds, between 30–50%. As evidence for Kosovo, Bajrami and al. (2020) used the VAR model for a period from 2008 to 2018, and found a threshold of 10% to 30%, Beha (2024) on the other hand found a threshold of 27,75% to 36,2% by applying a GMM method for 2008: Q1 to 2022: Q4. This suggests that public debt management strategies must be tailored to each country's structural characteristics, institutional capacity, and vulnerability to external shocks.

If the focus is brought to the European union, many studies focused on different samples of members, as Mencinger (2014) who found 2 thresholds, a threshold varying between 80% to 94% for the old members, and one varying between 53% to 54% for new members. Bilan and Ihnatov (2015) worked on a bigger sample of 33 countries for 1990 to 2011, and found a different threshold varying between 45% to 55%. Dinca and Dinca (2015) used 11 former communist European and found a 50% debt-to-GDP ratio, while Petkovski and al. (2024) worked on 11 new member countries for 2000 to 2021 and found a ratio varying between 58,5% and 73,5%.

For Africa, Benayed, Gabsi and Belguith (2015) analyzed a sample of 10 African economy for a period from 1981 to 2020, and determined a threshold of 47,31%, while Abate (2024) focused only on Ethiopia by using the ARDL model for a longer period of 1982 to 2018, and found a ratio of 66,75%.

Focusing more on the MENA region, Alshmmay and al. (2020) used 20 countries to find a debt-to-GDP ratio of 58% for all the chosen countries, while Alsamara, Mrabet and Mimouni (2024) divided 14 MENA countries into 2 categories, oil ones with a ratio of varying between 46% to 69%, and non-oil ones with a ratio varying between 74% to 81%. Another two studies focusing on the same sample of 4 MENA countries (Morocco, Tunisia, Turkey, Algeria) and used the same econometric method but a different time lap, Omrane and al. (2017) found 39,5% and Khanfir (2019) determined a 42% ratio, these different outcomes keep proving that the debt-to-GDP ratios can change if one part of the study changes, such as the time-lapse, method or size of the sample.

Furthermore, the debate highlights that the influence of public debt on growth is heavily context-dependent. Many factors, internal and external, such as global financial conditions,

access to international capital markets, international crises as Covid 19 and its consequences, interest rate environments and exchange rate stability, all interact with fiscal policy decisions. In other words, in the past 10 years public debt surged globally, due to global crises and shocks, such as COVID-19 pandemic, when the many governments used debt to finance health spending, the Ukraine War since 2022, that disrupted energy markets, which drove up borrowing needs for energy and food subsidies. To this can be added to the macroeconomic factors, for instance the sharp rise in interest rates and the effect of inflation.

In countries with strong institutions, sound governance, and clear plans for public investment, public debt can indeed act as a lever for long-term development. On the other hand, countries with weaker institutional frameworks and political instability face a higher risk of debt distress. Overall, the analysis indicates that the debate on public debt and growth should shift from inflexible views and embrace a more refined, nuanced and context-sensitive perspective. The key lies in the maintain of fiscal discipline, ensuring that public debt is used for productive purposes and respecting a threshold that depends on the specificities and characteristics of each country.

Public debt cannot be defined as inherently good nor bad, it should be seen as a tool that can drive prosperity when used wisely but can lead to severe economic consequences when mismanaged. The empirical evidence in general calls for prudent, context-aware fiscal policies that balance short-term needs with long-term sustainability.

Based on these findings, there are important practical implications, such as the fact that government needs to balance the short-run spending boosts with the long-run financial health, while making sure that debt is used in a wise way that supports economic growth, also the importance of clear communication of fiscal policies can help create a better environment for investment. It can also be noted that policymakers should not feel obliged to take the debt-to-GDP ratio previously determined by a researcher, such as the 90% proposed by Reinhart and Rogoff without prior context investigation. Governments should analyze the economic conditions of the country, and take into account the purposes and sources of the borrowings and the ability and capacity of the country to refund the borrowed debt. Since every country possesses its unique characteristics and capabilities, a standard and uniform threshold cannot be universally applied.

These findings require greater urgency in the actual economic environment, where the high borrowing costs, slow global trade and increased uncertainty leaves little marge for fiscal errors. A well and strategically managed debt, combined with specific and productive investments, becomes a necessity for both domestic stability and resilience against global shocks.

For the future research, it can probably focus on exploring the long-term effects of public debt for various economic contexts, and more specifically in emerging markets where the implications of elevated debt levels may differ vaguely from those explored in advanced economies. By developing the understanding of those factors, governments can take better informed decisions that support sustainable economic growth in an increasingly complex environment. In another view, the future research can bring the light on how public debt affects economic growth in low, lower-middle income and upper-middle income countries, this suggestion can be explained by the fact that these economies need higher funding to develop and improve their economic status.

6. Conclusion

The analysis of the literature confirms that the relationship between public debt and economic growth is not purely positive nor universally detrimental, it rather depends on the context of each economy and influenced by various structural, institutional and macroeconomic factors. While the Keynesian theory highlights the potential of using debt to finance expenditure to

stimulate growth particularly during recessions, the classical perspective underscores the long-term risks of excessive debt, including the crowd out effect of private investment. To these theories is added to a growing body of non-linear studies that introduce the notion of thresholds, beyond which public debt starts negatively impacting growth.

Empirical evidence illustrates a great heterogeneity in findings, driven by differences in the composition of the sample, the methodology adopted, institutional quality, and the economic environment. Economies characterized by strong governance and efficient resource allocation are able to sustain higher debt levels without affecting growth, while others can encounter harmful effects at relatively low thresholds. This divergence illustrates the limitations of applying unique debt-to-GDP ratio, such as the 90% ratio popularized by Reinhart and Rogoff, without taking in consideration the specific circumstances of each country.

The actual relatively complex global economic environment adds urgency to the debate. With global public debt reaching high levels, the margin for fiscal error is very limited. The challenge that both advanced and emerging economies are facing is to balance short-term fiscal measures with long-term debt sustainability. That way, strategic debt management, supported by credible fiscal frameworks and oriented toward investments that will help enhance growth, is essential to ensue macroeconomic stability and build resilience against external shocks.

Policy implications are clear, governments can prioritize an efficient allocation of borrowed resources, ensure coherent and transparent fiscal policy in communication so that investor trust can be preserved, and choose debt strategies that go in line with their specific economic structure, institutional capacity, and its vulnerability to global market conditions.

A uniform debt threshold can be replaced by a more adaptative, flexible and context-sensitive frameworks, which take into account internal realities with international influences.

Future research should continue to develop the understanding of how public debt influences economic growth across different economic contexts, particularly in low- and middle-income countries where financing needs are substantial and fiscal space is limited.

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