



The Impact of the Debt Public Structure on the Macroeconomic Indicators: A Case of Palestine

Ghassan Daas^{1*}, Maysa Ezzedine Yahya Al-Omari², Yara Odai Sulaiman Sulaiman³, Muhammad Salah Ibrahim Al-Zahir⁴, Ra'fat Jallad⁵

Type: Full Article. Received: 30th Dec. 2025, Accepted: 18th April. 2026 .

Accepted Manuscript, First Online

Abstract: The Palestinian economy operates under conditions of political and economic fragility, characterized by heavy dependence on foreign aid and restrictions on trade and investment. During the period from 2005 to 2023, Palestine experienced significant global and local economic fluctuations, including the global financial crisis, the COVID-19 pandemic, and ongoing political instability, all of which directly affected macro 220 economic performance. **Purpose:** This study aims to analyze the relationship between the structure of public debt in Palestine, specifically the distribution between domestic and external debt, and its impact on key macroeconomic indicators, including gross domestic product, unemployment, inflation, and financial stability. **Methodology:** The study employed a descriptive analytical and quantitative approach using official annual data for the period 2005–2023 obtained from the Palestinian Monetary Authority, the Palestinian Central Bureau of Statistics, and the World Bank. Domestic and external public debt ratios were used as independent variables, while macroeconomic indicators served as dependent variables. Unit root tests (ADF and PP) were conducted to assess time-series stability, followed by the application of the Autoregressive Distributed Lag (ARDL) model to examine both short- and long-term relationships between public debt structure and macroeconomic indicators. **Results:** The findings provide insights into how the structure of public debt influences unemployment, inflation, gross domestic product, and financial stability in Palestine. The results highlight differences in the economic effects of domestic versus external debt and emphasize the importance of managing public debt efficiently under conditions of economic vulnerability and political uncertainty. **Conclusion:** The study concludes that understanding the structure of public debt is essential for improving economic stability and promoting sustainable development in Palestine. Effective public debt management, along with policies aimed at reducing dependence on external aid and enhancing domestic financial self-reliance, is necessary to support long-term economic and social development. **Recommendations:** the study highlight the use of effective debt management, reducing excessive reliance on external sources of financing, and promoting the sustainability of domestic financing systems. The study also encourages the use of public debt for development projects that can promote financial stability and ensure sustainable economic development. **Keywords:** public debt, gross domestic product, unemployment, inflation, financial stability, ARDL

أثر هيكل الدين العام على المؤشرات الاقتصادية الكلية: حالة فلسطين

غسان دغاس^{1*}، ميساء عز الدين يحيى العمري²، يارا عدي سليمان سليمان³، محمد صلاح إبراهيم الظاهر⁴، رأفت الجلاد⁵

تاريخ التسليم (2025/12/30)، تاريخ القبول (2026/4/18)

المخلص: يعمل الاقتصاد الفلسطيني في ظل ظروف من الهشاشة السياسية والاقتصادية، ويتم بالاعتماد الكبير على المساعدات الخارجية ووجود قيود على التجارة والاستثمار. وخلال الفترة من 2005 إلى 2023، شهدت فلسطين تقلبات اقتصادية عالمية ومحلية كبيرة، بما في ذلك الأزمة المالية العالمية، وجائحة كوفيد-19، واستمرار عدم الاستقرار السياسي، وكلها أثرت بشكل مباشر في الأداء الاقتصادي الكلي. **الهدف:** تهدف هذه الدراسة إلى تحليل العلاقة بين هيكل الدين العام في فلسطين، وبخاصة التوزيع بين الدين المحلي والدين الخارجي، وأثره على المؤشرات الاقتصادية الكلية الرئيسية، بما في ذلك الناتج المحلي الإجمالي، والبطالة، والتضخم، والاستقرار المالي. **المنهجية:** اعتمدت الدراسة المنهج الوصفي التحليلي والمنهج الكمي باستخدام بيانات سنوية رسمية للفترة 2005–2023، تم الحصول عليها من سلطة النقد الفلسطينية، والجهاز المركزي للإحصاء الفلسطيني، والبنك الدولي. واستخدمت نسب الدين العام المحلي والخارجي كمستقلة، في حين استخدمت المؤشرات الاقتصادية الكلية كمستغيرات تابعة. كما أجريت اختبارات جذر الوحدة (ADF و PP) لتقييم استقرار السلاسل الزمنية، تلاها تطبيق نموذج الانحدار الذاتي للفجوات الموزعة (ARDL) لدراسة العلاقات قصيرة وطويلة الأجل بين هيكل الدين العام والمؤشرات الاقتصادية الكلية. **النتائج:** توفر النتائج رؤى حول كيفية تأثير هيكل الدين العام في معدلات البطالة والتضخم والناتج المحلي الإجمالي والاستقرار المالي في فلسطين، كما تبرز الفروق في الآثار الاقتصادية للدين المحلي مقارنة بالدين الخارجي، وتؤكد أهمية الإدارة الكفوة للدين العام في ظل ظروف الهشاشة الاقتصادية وعدم اليقين السياسي. **الاستنتاجات:** خلصت الدراسة إلى أن فهم هيكل الدين العام يُعد أمراً أساسياً لتحسين الاستقرار الاقتصادي وتعزيز التنمية المستدامة في فلسطين. كما أن الإدارة الفعالة للدين العام، إلى جانب السياسات الهادفة إلى تقليل الاعتماد على المساعدات الخارجية وتعزيز الاعتماد الذاتي المالي المحلي، تُعد ضرورية لدعم التنمية الاقتصادية والاجتماعية على المدى الطويل. **التوصيات:** تسليط الدراسة الضوء على استخدام الإدارة الفعالة للدين، والحد من الاعتماد المفرط على مصادر التمويل الخارجية، وتعزيز استدامة نظم التمويل المحلية. كما تشجع الدراسة على توجيه الدين العام نحو المشاريع التنموية التي من شأنها تعزيز الاستقرار المالي وضمان تحقيق التنمية الاقتصادية المستدامة.

الكلمات المفتاحية: الدين العام، الناتج المحلي الإجمالي، البطالة، التضخم، الاستقرار المالي، نموذج ARDL.

¹ * Department of Accounting, Faculty of Business and Communication, An-Najah National University, Nablus-Palestine , <https://orcid.org/0000-0002-1009-3293>

*Corresponding author email: daas@najah.edu

² Master of accounting program, An-Najah National University,

³ Master of accounting program, An-Najah National University,

⁴ Master of accounting program, An-Najah National University,

⁵ Investment and Finance program , Faculty of Business and Communication, An-Najah National University, Nablus-Palestine

¹ قسم المحاسبة كلية الاعمال والاتصال - جامعة النجاح الوطنية نابلس - فلسطين

² برنامج ماجستير المحاسبة - جامعة النجاح الوطنية

³ برنامج ماجستير المحاسبة - جامعة النجاح الوطنية

⁴ برنامج ماجستير المحاسبة - جامعة النجاح الوطنية

⁵ برنامج الاستثمار والتمويل - كلية الاعمال والاتصال - جامعة النجاح الوطنية نابلس - فلسطين

1. Introduction

Considering the global economic developments and the financial challenges facing governments in both developed and developing countries, it becomes necessary to examine government financing strategies, whether from internal or external sources. Domestic financing refers to revenues that governments obtain from taxes, fees, and other public revenues from within the national economy, while external financing relies on loans, grants, and aid from international institutions, banks, and other countries. Each type of financing has its own advantages and challenges, and countries' strategies vary according to their economic capabilities and position on the international stage. In developed countries, government financing relies heavily on tax revenues and sustainable domestic fiscal policies. These countries have access to developed financial markets, allowing them to issue government bonds or resort to low-interest loans. Despite their increasing reliance on their domestic financial markets, they remain able to attract foreign investment when needed ([Awwad, 2021](#)). In developing countries, on the other hand, dependence on external financing is evident, especially given the lack of domestic resources and weak financial systems. These countries often face difficulties in collecting sufficient tax revenues to support their public expenditures, forcing them to resort to external loans ([Garg, 2010](#)). In addition, central banks' decisions on key interest rates have become increasingly out of sync. Interest rates began to decline in the second half of 2023 in some countries that experienced a drop in inflation. Global public debt levels have reached staggering heights, expected to exceed US\$100 trillion (93% of global GDP) in 2024 and continue to rise until the end of the current

decade (approaching 100% of GDP by 2030). While debt is expected to stabilize or decline in about two-thirds of countries, it will remain above pre-pandemic levels, with more than half of global debt and about two-thirds of global GDP expected to remain unstable ([Garg, 2010](#)).

The global economic recovery from the COVID-19 pandemic, Russia's invasion of Ukraine, and the cost-of-living crisis continues to prove surprisingly resilient. Inflation is falling faster than expected from its peak in 2023, yet long-term borrowing costs remain high ([International Monetary Fund, 2021](#)).

The conflict in Gaza and Israel has caused immense human suffering. In addition, disruptions to shipping in the Red Sea and oil production cuts have exacerbated vulnerabilities arising from high debt levels and high borrowing costs. External public debt is an important source of financing, as well as an essential complement to domestic sources of financing to support economic growth and development and other needs of the state. Developing countries typically resort to external borrowing. However, if this debt is not used in productive, income-generating activities, it will reduce the state's ability to repay and meet the debt service obligations. Most studies agree that external public debt is one of the most important factors significantly affecting economic growth, and that both influence each other (i.e., there is a reciprocal relationship between public debt and economic growth). However, if it exceeds reasonable limits, it will constitute an obstacle to sustainable economic growth ([Mankiw, 2020](#)).

2. Problem statement:

Palestine faces significant economic challenges as a result of the Israeli occupation and the unstable political situation, making it heavily dependent on

external financing to cover its basic and development needs. Examples of this dependence include government aid, grants and loans, and humanitarian assistance. However, reliance on internal financing is vital to achieving economic sustainability and reducing external dependence, and external financing is a lifeline for the Palestinian economy, especially given the restrictions on movement and the economy imposed by the occupation. The Palestinian Authority relies heavily on international aid to cover civil servant salaries and implement development projects ([Awwad, 2021](#)). In addition, Palestine faces challenges in promoting external financing, including the political situation, which is negatively affect investment and reduces confidence in the Palestinian economy. As well, the Palestinian economy is closely linked to Israeli economy, making it vulnerable to economic and political developments in Israel ([Morrar & Sultan, 2024](#)).

In this context, Palestine stands out as an important case study, as it faces unique political and economic challenges that significantly affect its debt structure. Although there are some studies that have addressed various aspects of the Palestinian economy, there is a lack of studies that focus specifically on analyzing the relationship between debt structure and economic indicators in Palestine, especially in light of recent developments in the region ([Yoganandham, 2023](#)).

Although there are some studies that address the impact of public debt structure on economic indicators in some Arab countries, there are very few studies specializing in the Palestinian context. Most previous studies have focused on developing countries in general or on Arab countries without delving into the details of the public debt structure in Palestine or

examining its specific effects on the economic indicators of this country. The main gap that this study seeks to address is the lack of local studies focusing on analyzing the impact of the debt structure (domestic and external) on economic indicators in Palestine.

3. Study Objectives:

The study aims to answer a holistic question of what is the impact of the public debt structure (domestic and external) on macroeconomic indicators? The study investigates five macroeconomic variables, namely: the gross domestic product (GDP), the unemployment rate, inflation, and the financial stability, Therefore, this study seeks to provide a comprehensive overview of the impact of different financing options on Palestinian economic performance, considering the unique challenges posed by the Israeli occupation and the unstable political situation.

4. Importance and contributions:

The importance of this study stems from the crucial role that debt plays in shaping the national economy and the ability of governments to achieve economic stability and sustainable development. Palestine relies heavily on debt financing to cover its budget deficit. Therefore, understanding the impact of the debt structure (whether internal or external) on key economic indicators such as economic growth, inflation, unemployment, and financial and political stability is vital. The study helps shed light on the economic challenges resulting from debt accumulation and identify fiscal policies that can promote more productive use of debt. In addition, the study provides actionable insights to support decision-makers in promoting fiscal sustainability and mitigating the negative effects of indebtedness on the Palestinian economy, given the unique economic circumstances

facing the country ([Aimola & Odhiambo, 2020](#)). Furthermore, the study highlights the impact of high debt levels on macroeconomic stability and proposes solutions to alleviate the financial burden and improve public spending to ensure a balance between revenue and expenditure. The results of this study are not limited to local benefits but extend to international donors who can use this data to assess Palestine's ability to sustainably benefit from external financing, according to a study by ([Reinhart & Rogoff, 2010](#)). Public debt levels have a clear negative impact on economic growth, which makes studying the Palestinian case necessary to analyze this relationship and determine appropriate policies ([Aimola & Odhiambo, 2020](#)).

This study contributes to the analysis of the structure of public debt (domestic and external) in Palestine and explains how it affects macroeconomic indicators, such as economic growth, unemployment rate, inflation, and gross domestic product (GDP). Therefore, the results of this study provide Palestinian government decision-makers with a deeper understanding of debt distribution and management to avoid future financial crises. This study is a tool for international donors and financiers to assess Palestine's debt-bearing capacity and the extent to which it benefits from external financing ([Manalo et al., 2024](#)).

5. Literature Review and Hypotheses Development

The relationship between government dependence on internal (domestic) and external financing and economic and financial indicators is a topic that has received widespread attention in economic literature due to its significant impact on macroeconomic performance and financial sustainability.

The theory: The theory of excessive debt burden ([Krugman, 2018](#)) refers to the negative effects of excessive debt accumulation, whereby there is little capacity to repay it. If a country's debt exceeds its economy's capacity to repay it, the costs of servicing the debt will discourage and hinder investment. As ([Sachs, 2002](#)) emphasized that the external debt accumulated by low-income developing countries will lead to a decline in economic growth and hinder it, as huge debts will lead to an increase in the budget deficit. ([Krugman, 2018](#)) explains that a high debt burden reduces the incentives for governments or companies to invest in new projects because the returns on these investments will often go to servicing the debt rather than promoting economic growth.

Many previous studies have shown a statistically significant relationship between public debt, whether domestic or external, and various economic determinants such as inflation, economic growth, and exchange rates. With regard to the impact of the Palestinian government's reliance on domestic and external financing and its effect on economic indicators, a study by ([Abbas & Christensen, 2010](#)) found that the development of domestic debt markets in developing and emerging countries contributes to improved economic growth. The study indicated that developing countries that resorted to domestic debt as a means of financing experienced improved macroeconomic performance compared to those that relied more heavily on external debt. The study concluded that when used effectively, domestic debt can contribute significantly to stimulating economic growth and is less affected by external economic fluctuations (i.e., more sustainable), thereby enhancing the stability of economic indicators. This

study was consistent with another study ([Kourtellos et al., 2013](#)), which concluded that countries that rely excessively on external debt suffer from slower economic growth compared to those that lean more toward domestic financing. The results indicated that domestic financing, despite its limitations, is safer and contributes to reducing the risk of financial collapses that may result from external debt, as well as providing flexibility in the management of public financial resources. In another study conducted by [Pattillo et al., \(2011\)](#) pointed to the non-linear relationship between external debt and economic growth. The study concluded that excessive reliance on external debt leads to a decline in economic growth rates in the long term, due to the high cost of debt, which places a burden on government budgets and thus limits their ability to invest in productive and other sectors. These findings support the view that excessive reliance on external debt may place countries in a position of excessive dependence on external financing, exposing the economy to the risks of financial instability. The study by [Cooray et al., \(2017\)](#) presented a different view, examining the relationship between public debt levels (external and internal) and corruption as an economic and financial indicator. It noted that increased reliance on debt can increase opportunities for corruption, which in turn has a negative impact on overall economic performance. Thus, governments that rely heavily on external or internal debt may face political and administrative pressures that make them vulnerable to illegal practices such as corruption, which undermines the credibility of economic policies and hinders economic growth.

5.1. The Impact of the Public Debt Structure on Gross Domestic Product

The debt structure, whether internal or external, is one of the main factors affecting gross domestic product (GDP), as it determines the economy's ability to achieve sustainable growth. When debt, whether domestic or external, is used effectively to finance development projects, it leads to increased productivity and higher economic growth rates. For example, concessional external debt, with low interest rates and long repayment terms, can contribute to the financing of infrastructure projects, stimulating various economic sectors and contributing to GDP growth ([Were, 2001](#)). However, high levels of debt can have negative effects on the economy. In the case of external debt, excessive reliance on it increases the debt service burden (interest and installments), reducing the financial resources available for investment in development. External debt also makes the economy more vulnerable to external shocks such as exchange rate fluctuations or a decline in international aid. As for domestic debt, it may lead to competition among the private sector for available sources of financing in the local market, weakening companies' ability to invest and leading to a decline in growth ([Teles & Cesar Mussolini, 2014a](#)). In the Palestinian context, the debt structure poses a major challenge to GDP. External debt is often used to finance operating expenses rather than development projects, limiting its positive impact on economic growth. Internal debt, which relies on borrowing from local banks, reduces the resources available to the private sector, negatively affecting investment and productivity ([Awwad, 2021](#)). In addition, previous studies indicate that the impact of debt on GDP depends on how it is managed. For example, a study by [Reinhart & Rogoff,](#)

(2010). showed that exceeding certain debt-to-GDP ratios leads to a significant slowdown in economic growth. In the Palestinian case, the absence of an effective debt management strategy makes it difficult to transform debt into a productive tool that supports the economy, which calls for focusing efforts on improving the use of financial resources and directing debt towards projects that promote sustainable growth. As Keynesian theory confirms, borrowing will affect income and public spending, as it will positively affect aggregate demand in the economy, which in turn will lead to an increase in national and operating income. Keynes assumes that the state should increase spending by imposing taxes, thereby creating a deficit in the state budget and forcing it to resort to the banking system to finance it (Abd Al-Daem Mohamed, 2024). Accordingly, the first hypothesis is:

H₁: There is a statistically significant impact of the public debt structure (domestic and external) on gross domestic products.

5.2 The Impact of the Public Debt Structure on Inflation

The debt structure has a direct and indirect impact on inflation rates, as this impact is linked to the nature of the debt (domestic or external) and its financing mechanisms. When the government relies on domestic debt by borrowing from local banks or issuing bonds, this may lead to an increase in market liquidity, especially if the debt is financed by printing money. This monetary expansion causes an increase in demand for goods and services without a corresponding increase in production, leading to higher inflation rates. Furthermore, large domestic borrowing may crowd out the private sector from

sources of financing, weakening productive investments and leading to imbalances between supply and demand. (Aimola & Odhiambo, 2020) As for external debt, its impact on inflation depends on how it is used. If it is used to finance development projects or import raw materials, it may help improve productivity and reduce inflation in the long term. However, excessive reliance on external debt increases the risk of exchange rate volatility, as a weak local currency leads to higher import costs, pushing inflation rates up. These risks are particularly pronounced in developing economies that are heavily dependent on foreign financial flows. (Hilscher et al., 2022) In Palestine, reliance on domestic and external debt to finance operating expenditures increases inflationary pressures. Domestic borrowing raises interest rates, limiting the private sector's ability to invest, while reliance on external debt makes the economy more vulnerable to shocks associated with exchange rate fluctuations or declines in international aid. Therefore, effective management of the debt structure is vital to reduce its negative impact on inflation rates and achieve sustainable economic stability (MAS, 2020). The monetary theory of inflation asserts that price levels are determined by monetary considerations. There are two versions of this theory: a traditional version and a new version. The traditional version assumes that inflation is a monetary phenomenon, but that money growth is dictated by fiscal authority, so the central bank does not have absolute control over the money supply. The theory assumes that public debt has an impact on wealth and thus leads to inflation, because public debt increases individuals' financial wealth (government securities), which in turn leads to increased spending and

consumption, resulting in inflationary pressures. As for the new version of the theory, it states that if the growth of the money supply is not changed, fiscal policy will independently affect the inflation rate, and thus the central bank will be unable to commit to the inflation target, because inflation is not necessarily a monetary phenomenon ([Hilscher et al., 2022](#)). The second hypothesis is:

H₂: There is a statistically significant impact of the public debt structure (domestic and external) on inflation rates.

5.3 The effect of the public debt structure on unemployment rates

The debt structure significantly affects unemployment rates in different economies, whether the debt is domestic or external. When the government relies on domestic debt by borrowing from local banks or issuing bonds, this often leads to higher interest rates in the market, reducing the ability of private companies to borrow and invest ([Garg, 2010](#)). This crowding out in the market limits the private sector's ability to expand and hire more workers, leading to higher unemployment rates. Furthermore, if domestic debt is financed through money printing, the associated inflation reduces purchasing power, limiting aggregate demand for goods and services and leading to a reduction in available jobs ([AL-Habashneh, A. G., 2020](#)). On the other hand, external debt can have both positive and negative effects on unemployment. If the debt is used to finance development and infrastructure projects, it can contribute to the creation of new jobs. However, if it is used only to cover current expenditures or if debt servicing is high, it limits the ability to invest in productive sectors that contribute

to job creation. It has been shown that high levels of public debt contribute to macroeconomic volatility, which negatively affects the labor market. In the Palestinian case, reports have shown that reliance on domestic and external debt to finance operating expenditures rather than development investments has reduced the economy's ability to create new jobs, contributing to high unemployment rates amid weak resource allocation for the development of economic sectors capable of creating sustainable employment opportunities ([Mankiw, 2020](#)). A report MAS 2020 also noted that this situation exacerbates the economic challenges facing Palestine in the face of rising unemployment. The excessive debt burden theory suggests that high levels of public debt, especially external debt, may discourage domestic and foreign investment, as investors fear future tax increases to repay debts, which in turn leads to reduced investment and thus higher unemployment rates. Therefore, it appears that the higher the public debt, the more negative the expectations regarding economic stability ([Cooray et al., 2017](#)). The third hypothesis is:

H₃: There is a statistically significant effect of the public debt structure (domestic and external) on unemployment rates.

5.4 The Impact of Public Debt Structure on Financial Stability

Several global frameworks and institutions establish the budget deficit as a formal measure of stability: **The IMF (International Monetary Fund)**: The IMF views a sound fiscal position as critical for macroeconomic stability. It identifies the fiscal position as a measure of a government's ability to find financing and its vulnerability as a sovereign debtor.

The World Bank: The World Bank classifies central government budgets as a primary indicator of macroeconomic stability. It warns that large budget deficits pose "real threats" to stability, growth, and development.

The OECD (Organization for Economic Co-operation and Development): The OECD uses the general government deficit as a standard indicator for international comparisons of fiscal discipline. It notes that when a deficit grows faster than GDP, it can lead to rising public debt and financial instability.

European Union (Maastricht Treaty/Stability and Growth Pact): In the EU, avoiding an "excessive deficit" is a mandatory requirement. The reference value is set at a maximum of 3% of GDP for the general government deficit

The debt structure has a significant impact on the political situation and financial stability in different countries, whether the debt is domestic or external. When public debt accumulates excessively, it can lead to increased financial pressure on the government, limiting its ability to allocate resources to national priorities such as education, healthcare, and infrastructure. This situation can lead to political tensions, as divisions arise between political forces over how to manage public debt and reduce spending. In some cases, high debt can lead to reduced government support for vital sectors, sparking popular protests and affecting political stability (James, 2024b). From a financial perspective, the debt structure can cause financial volatility, with some countries struggling to manage debt repayments or meet financial obligations in times of economic crisis. In cases of fiscal deficits or interest rate volatility, the government may find itself forced to resort to austerity measures or tax increases, leading to a

deterioration of confidence in the economy and increasing financial risks. This deterioration in confidence can negatively affect financial stability and increase future economic risks (Teles & Cesar Mussolini, 2014b). In the Palestinian case, reliance on external and domestic debt to finance the fiscal deficit puts additional pressure on the Palestinian government, further complicating the political situation amid internal and external conflicts. A report of MAS 2020 also noted that this financial burden may weaken the government's ability to implement effective fiscal stabilization policies, thereby exacerbating political instability. the impact of political stability on the ability of governments to use various sources of financing, with some researchers pointing out that political stability contributes to improving the stability of the overall economy, reducing the cost of borrowing and increasing the government's ability to use internal and external financing effectively. As stated in the study (Mofady & Malawi, 2022). The study confirmed that political stability reduces the costs associated with external borrowing, which enhances the ability of governments to raise funds. The study (Smaoui et al., 2017) , confirmed that governments that enjoy political stability find public debt costs lower, while debt costs increase in countries with low political stability, which negatively affects the government's ability to borrow . The new classical growth theory developed by Robert Solow in the 1950s discusses how public debt can affect financial stability and, therefore, if public debt is used to finance productive development projects, it contributes to improving growth and financial stability. However, if debt is misused, it leads to long-term financial burdens and increases the risk of financial

crises ([Kadhim & Alwan, 2020](#)). The fourth hypothesis is:

H₄: There is a statistically significant effect of the public debt structure (domestic and external) on financial stability.

6. Study Methodology

6.1 Study Population and Sample

The study aims to analyze the impact of the public debt structure (domestic and external) on macroeconomic indicators in Palestine during the period 2005-2023. This period is selected due to the major economic fluctuations it witnessed, including the global financial crisis in 2008 and the COVID-19 pandemic during 2020-2021. Data of macroeconomic indicators and the public debt structure are obtained from the Palestinian Monetary Authority and the Palestinian Central Bureau of Statistics, World Bank data

bank, the International Monetary Fund, and the Palestinian Ministry of Finance.

6 2. Study variables

The variables used in this study are selected to capture the key dimensions of the public debt structure and macroeconomic performance in Palestine. As shown in below table, the study distinguishes between independent and dependent variables. The independent variables represent the structure of public debt and are measured by the ratio of domestic public debt to total public debt and the ratio of external public debt to total public debt. The dependent variables reflect core macroeconomic indicators, including the unemployment rate, financial stability, inflation rate, and real gross domestic product. These variables are chosen based on their relevance in the economic literature and their suitability for explaining the effects of public debt structure on macroeconomic performance within the Palestinian context.

Table 1: Study variables

Variables	Symbol	Measurement	Source
Independent Variables			
Domestic public debt structure	ID	Ratio of domestic debt to total public debt	(Kadhim & Alwan, 2020)
External public debt structure	ED	External debt ratio / total public debt	(Kadhim & Alwan, 2020)
Dependent Variables			
Unemployment rate	UE	Annual unemployment rate	
Financial stability	FS	Deficit ratio Budget deficit / Total expenditure	(OECD et al., 2019)
Inflation rates	INF	Annual inflation rate	
Real Gross domestic product	GDP	Natural logarithm of Real GDP	

6.3 Study models

6.3.1 Stationarity Testing

The study employs unit root tests (ADF and PP) to assess the stationarity of the time series data. Stationarity is a critical assumption in time series analysis, as it requires that the mean, variance, and autocorrelation of a series remain constant over time, ensuring the reliability of model estimates[30]. When a variable is non-stationary, it must be differenced to remove trends and make it suitable for econometric modeling, which is consistent with the requirements of the ARDL approach[31].

The Autoregressive Distributed Lag (ARDL) model is used to measure the impact of the public debt structure (PDS) on several macroeconomic indicators represented by inflation rate (INF), unemployment rate (UNEMP), gross domestic product (GDP), and financial stability index (FS). The ARDL equations for each dependent variable are as follows:

Importantly, the ARDL framework allows for a mixture of I(0) and I(1) variables but excludes variables integrated of order two I(2), which is explicitly verified prior to model estimation.

6.3.2 ARDL Model Specification

To examine the dynamic relationship between public debt structure (PDS) and key macroeconomic indicators, namely inflation (INF), unemployment (UNEMP), economic growth (GDP), and financial stability (FS), the study employs the Autoregressive Distributed Lag (ARDL) model developed by Pesaran et al. (2001).

The general ARDL (p, q) specification can be expressed as:

Model 1 : Inflation Equation

$$F_t = \alpha + \sum_{i=1}^p \alpha_{1i} \in F_{t-i} + \sum_{i=0}^q \beta_{1i} PDS_{t-i} + \varepsilon_t$$

Model 2: Unemployment Equation

$$UNEMP_t = \alpha + \sum_{i=1}^p \alpha_{2i} UNEMP_{t-i} + \sum_{i=0}^q \beta_{2i} PDS_{t-i} + \varepsilon_t$$

Model 3: Economic Growth Equation

$$GDP_t = \alpha + \sum_{i=1}^p \alpha_{3i} GDP_{t-i} + \sum_{i=0}^q \beta_{3i} PDS_{t-i} + \varepsilon_t$$

Model 4: Financial Stability Equation

$$FS_t = \alpha + \sum_{i=1}^p \alpha_{4i} FS_{t-i} + \sum_{i=0}^q \beta_{4i} PDS_{t-i} + \varepsilon_t$$

Where:

- α = the constant term in the equation
- $\sum$ = summation symbol, representing all lagged periods
- $F_t, UNEMP_t, GDP_t, FS_t$ = current values of dependent variables at time t
- $F_{t-i}, UNEMP_{t-i}, GDP_{t-i}, FS_{t-i}$ = lagged values of dependent variables
- PDS_{t-i} = lagged values of the public debt structure
- α_{ji}, β_{ji} = model coefficients indicating the extent of the effect of each lagged variable
- ε_t = random term (error term), expressing the unexplained factors within the model

6.3.3 Error Correction Representation (Long-Run and Short-Run Dynamics)

To distinguish between short-run and long-run effects, the ARDL model is reparametrized into an Error Correction Model (ECM) form:

$$\Delta Y_t = \gamma_0 + \sum_{i=1}^{p-1} \gamma_i Y_{t-i} + \sum_{j=0}^{q-1} \delta_j \Delta PDS_{t-j} + \lambda ECM_{t-1} + \varepsilon_t$$

where:

- Δ denotes the first difference operator
- ECM_{t-1} is the error correction term derived from the long-run relationship
- λ represents the speed of adjustment toward equilibrium (expected to be negative and significant)

6.3.4 Bounds Testing for Cointegration

The existence of a long-run relationship between variables is tested using the ARDL bounds testing approach. The null hypothesis of no cointegration is tested against the alternative of a long-run relationship using the F-statistic: If upper bound then there is a cointegration. If $F < \text{lower bound}$, then there is no cointegration. However, If F lies between bounds, the result is inconclusive.

7. Analysis and Results

Descriptive Statistics

The descriptive statistics for the main variables used in the study are presented in this section, providing an overview of the data characteristics for the period 2005–2023. Summary statistics provide insights into the central tendency, dispersion, and distribution of the variables used in the empirical analysis.

Unit Root Test

The unit root test is one of the essential tests used to ensure that the variables are stable before applying them to statistical models such as ARDL. A stable variable is one whose statistical characteristics do not change (variance, mean, and autocorrelation with time). An unstable variable needs to be differentiated in order to make it usable with statistical models [32]. The Augmented Dickey-Fuller (ADF) test and Phillips-Perron (PP) test are commonly used unit root tests that examine whether a time series has a unit root, indicating non-stationarity.

The results of unit root tests (ADF and PP) confirmed the stationarity of most variables at their first difference levels, which is consistent with the ARDL approach that allows variables to be integrated of different orders. Variables that are integrated of order zero, $I(0)$, or order one, $I(1)$, are suitable for ARDL estimation.

The results of the ARDL model analysis showed that there is no cointegration relationship between total public debt and gross domestic product, inflation, unemployment, and budget deficit. There may be short-term relationships between these variables, or there may be other factors affecting the relationship between debt and economic indicators. This means that these variables do not move together in a predictable manner in the long term, which is consistent with the study by [Reinhart & Rogoff, \(2010\)](#), which showed that exceeding a certain debt ratio has a negative impact on economic growth. Furthermore, the fluctuation in public debt levels, as shown in the time series, indicates the absence of a strategic plan for its management. Fiscal policies appear to be reactive rather than proactive, which often indicates that the government does not have a clear and specific plan for managing this debt. Proactive fiscal

policies mean that the government anticipates potential problems and develops plans to deal with them before they occur. If fiscal policies are "reactive," it means that the government only acts after the problem has occurred, which can exacerbate the situation and increase instability. The study [\(Reinhart & Rogoff, 2010\)](#) emphasized the importance of long-term planning in public debt management to avoid financial crises. The results of the analysis showed that domestic debt is more sustainable and secure and helps growth compared to over-reliance on external debt. A study [\(Abbas & Christensen, 2010\)](#) may have found evidence that domestic debt has a positive effect on economic growth, while external debt may have a negative effect. [\(Kourtellos et al., 2013\)](#) may have examined the relationship between debt structure (domestic versus external) and economic growth and found that domestic debt is associated with faster growth. [\(Pattillo et al., 2011\)](#) examined the impact of public debt on growth in developing countries and found that external debt can have a negative impact on growth if it exceeds certain levels. The analysis also showed that when the government expands borrowing without directly targeting marginalized sectors, the debt service burden is often financed by reducing spending on social services, which exacerbates social inequality. When the debt service burden increases, this particularly affects poor and marginalized groups that rely heavily on these services. For example, the education budget may be reduced, leading to a deterioration in the quality of education in public schools attended by the children of the poor. Or government support for healthcare may be

reduced, making access to treatment difficult for people with limited incomes. Studies ([Cooray et al., 2017](#)) have confirmed that poor public debt management can lead to a reduction in government support for basic services, negatively affecting poor groups. IMF reports indicate that ill-considered borrowing can increase poverty and inequality, especially if it is not used effectively to achieve inclusive growth. As for domestic debt, when it is used primarily to cover deficits rather than for productive investment, it shifts from being an economic stimulus tool to a burden that increases competition for liquidity. If the government is heavily indebted, its ability to implement effective expansionary fiscal policies becomes limited, as it must take into account the impact of these policies on public debt. A study by ([Teles & Cesar Mussolini, 2014a](#)) emphasized that the inefficient use of debt (i.e., using it to finance deficits rather than investment) reduces the effectiveness of expansionary fiscal policies and limits economic growth.

The analysis also found that if local financial institutions lose confidence in the government's ability to manage debt, they will demand higher interest rates, which will increase the cost of domestic debt and weaken its developmental impact. Local financial institutions demand a higher risk premium when lending to the government. This means that they demand higher interest rates on government loans and bonds to compensate for the increased risks they anticipate. ([Cooray et al., 2017](#)) This study pointed to a relationship between high public debt and increased opportunities for corruption and a deterioration in

confidence in the government's economic policies. In other words, when public debt levels rise, it may increase the likelihood of corruption in government institutions, leading to a decline in investor and citizen confidence in the government's ability to manage the economy efficiently and fairly. Debt affects government consumption and investment, and external debt may affect exports through currency fluctuations. In addition, high levels of private debt can reduce the confidence of companies and individuals in the economy. This can lead to reduced investment and spending, resulting in slower economic growth. Studies by ([Mankiw, \(2020\)](#), [Hamilton et al., \(2019\)](#), and ([Krugman, 2018](#)) provide a detailed analysis of how public debt affects the economy, including the components of gross domestic product. The analysis also revealed that a lack of coordination between fiscal policy tools (spending and taxation) and monetary policy (control of the money supply) exacerbates inflationary pressures, especially when relying on domestic debt, which simply means that the government borrows to cover the difference between its revenues and expenditures. This may be necessary at times, but overreliance on it has negative effects. Studies ([Hilscher et al., \(2022\)](#) and [Parui, \(2024\)](#)) have pointed out that inefficient use of debt reduces the impact of expansionary fiscal policies and limits economic growth. They provide a detailed analysis of how government debt affects the economy and explain the importance of using debt wisely to achieve sustainable development goals. Given that the Palestinian economy is organically linked to the Israeli economy, any impact of debt on economic indicators is compounded by external factors beyond the control of the Palestinian Authority, which increases the difficulty of debt

management and reduces the effectiveness of Palestinian fiscal policies. ([Morrar & Sultan, 2024](#)) This study emphasized that even if the Palestinian Authority has good plans for debt management and economic improvement, these plans may fail due to the constraints imposed by economic dependence.

The accumulation of public debt increases financial and political pressures, as it may lead to reduced spending on basic public services, such as education, health, and infrastructure, and reduces economic confidence. This causes a reduction in investment and spending, leading to a slowdown in economic growth. Reports by the report of IMF (2023), [MAS \(2020\)](#), [Mofady & Malawi, \(2022\)](#), and [Parui, \(2024\)](#) have found evidence that high

public debt is associated with increased financial and political risks in the countries studied. Effective debt management is essential for any economy, but it is even more important for economies with limited resources or facing political and economic challenges, such as Palestine. The government must regularly monitor and evaluate debt performance and make adjustments to its strategy as needed. A study by ([Reinhart & Rogoff, 2010](#)) showed that the absence of effective debt management policies leads to a significant decline in growth rates. In other words, this well-known study found that high levels of public debt can lead to a decline in economic growth. The study emphasized the importance of effective debt management to avoid these negative outcomes.

a. Financial stability:

Table 2: Analysis results – Financial stability

Variable	Coefficient	Std. Error	t-Statistic	Prob.
BUD_DEF(-1)	-0.298	0.188	-1.582	0.175
BUD_DEF(-2)	-0.327	0.289	-1.132	0.309
LGDP	-1.200	0.946	-1.268	0.261
LGDP(-1)	1.122	0.635	1.765	0.138
UNEMP	-0.066	0.836	-0.079	0.940
UNEMP(-1)	-3.429	1.391	-2.464	0.057
INFL_RATE	2.447	0.781	3.132	0.026
INFL_RATE(-1)	1.692	0.492	1.859	0.122
INTERNAL_DEBT_RATIO	-9490.13	5454.55	-1.740	0.142
EXTERNAL_DEBT_RATIO	-9490.19	5455.11	-1.740	0.142
C	9492.67	5462.36	1.738	0.143

The results in [table \(2\)](#) indicate that:

Variable	Impact	Significance
Inflation	Positive	High (Significant)
Lagged Unemployment	Negative	Moderate (Marginally Sig)
Debt Ratios	Negative	Very Low
Budget/GDP	Inconclusive	Low (Not Significant)

b. **Inflation rate:** The analysis of internal debt revealed that if it is financed by printing money, it leads to increased inflation. Studies by [Aimola & Odhiambo, \(2020\)](#) and [Hilscher et al., \(2022\)](#) confirmed that these studies may have found empirical evidence that financing domestic debt

by printing money leads to increased inflation in the countries studied. Similarly, the fiscal theory of inflation ([Parui, 2024](#)) suggests that inflation can be a result of government fiscal policies, especially if the government relies on printing money to finance budget deficits.

Table 3: Analysis results – inflation rate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INFL_RATE(-1)	-0.838	0.308	-2.718	0.042
INFL_RATE(-2)	0.456	0.081	5.639	0.002
BUD_DEF	0.300	0.072	4.138	0.009
BUD_DEF(-1)	0.208	0.048	4.345	0.0001
UNEMP	-0.098	0.185	-0.531	0.618
UNEMP(-1)	1.159	0.384	3.013	0.030
LGDP	0.736	0.220	3.338	0.003
INTERNAL_DEBT_RATIO	5225.06	1384.63	3.776	0.0001
EXTERNAL_DEBT_RATIO	5225.20	1384.63	3.776	0.0001
C	-5228.80	1386.20	-3.772	0.010

The results in [table \(3\)](#) indicate that:

Variable	Impact	Significance
INFL_RATE(-1)	Negative	Significant
INFL_RATE(-2)	Negative	Highly Sig.
BUD_DEF (0, -1)	Positive	Highly Sig.
LGDP	Positive	Highly Sig.
UNEMP(-1)	Positive	Significant
Debt Ratios	Positive	Suspect

- c. **Unemployment:** The analysis of domestic debt revealed that raising interest rates reduces employment opportunities, while external debt, if not directed toward investment, does not create jobs. When the government borrows from the domestic market, it competes with companies and individuals for available funds. This increases the demand for funds and raises interest rates. High interest rates

make investment less attractive to companies, leading to reduced production and employment. In addition, studies by the [Easterly & Schmidt-Hebbel, \(1993\)](#), [Manalo et al., \(2024\)](#), and [Hamilton et al., \(2019\)](#) may have found empirical evidence that high public debt is associated with increased unemployment in the countries studied.

Table 4: Analysis results – Unemployment rate

Variable	Coefficient	Std. Error	t-Statistic	Prob.
UNEMP(-1)	-0.094	0.192	-0.492	0.638
BUD_DEF	-0.052	0.085	-0.619	0.555
BUD_DEF(-1)	-0.127	0.094	-1.360	0.216
INFL_RATE	0.712	0.253	2.809	0.022
INFL_RATE(-1)	0.439	0.243	1.807	0.114
LGDP	0.123	0.077	1.592	0.155
INTERNAL_DEBT_RATIO	1225.92	528.87	2.318	0.053
EXTERNAL_DEBT_RATIO	994.99	421.85	2.359	0.050
C	-2223.61	877.32	-2.355	0.039

The results in [table \(3\)](#) indicate that inflation and debt ratios (both internal and external) are the dominant forces at play. Interestingly, the "real economy" indicators like unemployment and GDP are currently statistically "noisy" or irrelevant in this specific configuration.

d. Gross domestic product:

There is a short-term relationship between GDP and public debt.

The analysis showed that every 1% increase in GDP leads to a 1.83% increase in public debt. This means that there is an immediate or near-immediate response of public debt to changes in GDP, which is related to Keynes' theory

[\(Kadhim & Alwan, 2020\)](#) on the relationship between spending and national income, which is mostly financed by public debt. A study by [\(Teles & Cesar Mussolini, 2014b\)](#) showed that debt affects economic activity through fiscal crowding: when the government borrows heavily, it may raise interest rates, which reduces private investment and negatively affects economic growth.

Domestic public debt is relatively better than foreign debt for stimulating growth.

The analysis showed that domestic debt is more sustainable and secure and helps growth

Table 5: Gross Domestic Product

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LGDP(-1)	0.472	0.203	2.328	0.080
LGDP(-2)	0.307	0.145	2.126	0.101
UNEMP	0.521	0.163	3.197	0.033
UNEMP(-1)	-1.191	0.416	-2.860	0.046
BUD_DEF	-0.127	0.109	-1.163	0.310
BUD_DEF(-1)	-0.150	0.141	-1.064	0.347
INFL_RATE	0.526	0.345	1.522	0.203
INFL_RATE(-1)	1.183	0.512	2.309	0.082
INTERNAL_DEBT_RATIO	-7208.87	484.82	-14.869	0.0001
INTERNAL_DEBT_RATIO(-1)	-2169.59	1238.91	-1.751	0.155
EXTERNAL_DEBT_RATIO	-7209.35	484.71	-14.873	0.0001
EXTERNAL_DEBT_RATIO(-1)	-2169.69	1238.88	-1.751	0.155
C	9384.09	1441.60	6.509	0.003

compared to over-reliance on external debt. A study by [Abbas & Christensen,\(2010\)](#) may have found evidence that domestic debt has a positive effect on economic growth, while external debt may have a negative effect. [Kourtellos et al., \(2013\)](#) may have examined the relationship between debt structure (domestic versus external) and economic growth and found that domestic debt is associated with faster growth. [\(Pattillo et al., 2011\)](#) examined the impact of public debt on growth in developing countries and found that external debt can have a negative impact on growth if it exceeds certain levels.

Debt is the Primary Driver with negative impact of both internal and external debt. The magnitude of these coefficients (-7200) compared to other variables suggests that debt levels are the dominant factor suppressing the dependent variable.

5. Conclusions and Recommendations

The analysis of the structure of public debt in Palestine and its effects on macroeconomic variables concluded that domestic debt is safer and more sustainable than external debt, stimulating economic growth. In contrast, excessive reliance on external debt can exacerbate economic problems, especially when fiscal policy is unsustainable. Furthermore, issuing domestic debt through monetary expansion can increase inflation, exacerbating the fiscal situation. The study's recommendations highlight the importance of effective debt management, reducing excessive reliance on external sources of financing, and promoting the sustainability of domestic financing systems. The study also encourages the use of public debt for development projects that can promote financial stability and ensure sustainable economic development.

The findings reveal that external debt has a negative impact on the Palestinian economy,

while domestic debt can play a role in improving economic growth, but only under specific conditions of sound debt management.

The main findings of the study highlight the need to strengthen sustainable financial management, consolidate domestic financing, reduce dependence on foreign aid, and rationalize the strategic management of public debt in order to mitigate its negative effects on the Palestinian economy.

Disclosure Statements:

Ethical approval and consent to participate: Approval was obtained from all authors.

Availability of Data and Materials: The panel dataset in this study is available and ready to share.

Author Contributions: Input were from all the co-authors.

Competing Interests: The authors declare no conflicts of interest.

Source of the Research: It is an original paper not extracted from any thesis or dissertation.

Funding: This research received no external funding.

Acknowledgments: Many thanks for An-Najah National University and Palestinian Public Finance Institute for their support.

References

1. Abbas, S. M. A., & Christensen, J. E. (2010). The role of domestic debt markets in economic growth: An empirical investigation for low-income countries and emerging markets. *IMF Staff Papers*, 57(1), 209–255. <https://doi.org/10.1057/imfsp.2009.24>
2. Aimola, A. U., & Odhiambo, N. M. (2020). Public debt and inflation: A review of international literature. *Folia Oeconomica Stetinensia*, 20(1), 9–24. <https://doi.org/10.2478/fofi-2020-0001>
3. Awwad, B. (2021). Public debt and government expenditure: Applied study on the Palestinian environment. *International Journal of Business Governance and Ethics*, 15(1), 1–20. <https://doi.org/10.1504/IJBGE.2021.112325>
4. Cooray, A., Dzhumashev, R., & Schneider, F. (2017). How does corruption affect public debt? An empirical analysis. *World Development*, 90, 115–127. <https://doi.org/10.1016/j.worlddev.2016.08.020>
5. Dickey, D. A., & Fuller, W. A. (1979). Distribution of the estimators for autoregressive time series with a unit root. *Journal of the American Statistical Association*, 74(366), 427–431. <https://doi.org/10.2307/2286348>
6. Easterly, W., & Schmidt-Hebbel, K. (1993). Fiscal deficits and macroeconomic performance in developing countries. *The World Bank Research Observer*, 8(2), 211–237. <https://doi.org/10.1093/wbro/8.2.211>
7. Garg, J. (2010). *World Bank debt relief*. World Bank.
8. Hamilton, K., Naikal, E., & Lange, G.-M. (2019). *Natural resources and total factor productivity growth in developing countries: Testing a new methodology* (Policy Research Working Paper No. 8704). World Bank. <https://doi.org/10.1596/1813-9450-8704>
9. Hilscher, J., Raviv, A., & Reis, R. (2022). Inflating away the public debt? An empirical assessment. *The Review of Financial Studies*, 35(3), 1553–1595. <https://doi.org/10.1093/rfs/hhab018>
10. International Monetary Fund. (2021). *Global financial stability report, October 2021: COVID-19, crypto, and climate—Navigating challenging transitions*. International Monetary Fund.

<https://doi.org/10.5089/9781513595603.082>

11. James, H. (2024). The IMF and the European debt crisis. International Monetary Fund.
<https://doi.org/10.5089/9798400231902.071>
12. Kadhim, I. S., & Alwan, G. H. (2020). The impact of public debt on financial stability in Iraq. *Journal of Economics and Administrative Sciences*, 26(121), 335–368.
<https://doi.org/10.33095/jeas.v26i121.1979>
13. Kourtellos, A., Stengos, T., & Tan, C. M. (2013). The effect of public debt on growth in multiple regimes. *Journal of Macroeconomics*, 38, 35–43.
<https://doi.org/10.1016/j.jmacro.2013.08.023>
14. Krugman, P. (1988). Financing vs. forgiving a debt overhang. *Journal of Development Economics*, 29(3), 253–268. [https://doi.org/10.1016/0304-3878\(88\)90044-2](https://doi.org/10.1016/0304-3878(88)90044-2)
15. Manalo, R. A., Uy, C., & Bayona, S. P. (2024). Factors affecting financial well-being of Filipino basic education teachers: A structural equation model.
16. Mankiw, N. G. (2020). Reflections of a textbook author. *Journal of Economic Literature*, 58(1), 215–228.
17. MAS – Palestine Economic Policy Research Institute. (2020). Economic monitor (No. 60-62). Palestine Economic Policy Research Institute.
<https://mas.ps>
18. Mofady, F., & Malawi, A. (2022). The impact of political stability on foreign reserves. *Dirasat: Human and Social Sciences*, 49(6), 280–292.
<https://doi.org/10.35516/hum.v49i6.4009>
19. Morrar, R., & Sultan, S. (2020). The donor-driven model and financial sustainability: A case study from Palestinian non-governmental organizations. *Cosmopolitan Civil Societies: An Interdisciplinary Journal*, 12(2), 144–159.
20. OECD, Economic Commission for Latin America and the Caribbean, CAF Development Bank of Latin America, & European Union. (2019). *Latin American economic outlook 2019: Development in transition*. OECD Publishing.
<https://doi.org/10.1787/g2g9ff18-en>
21. Panigrahi, S. K., Azizan, N. A., Sorooshian, S., & Thoudam, P. (2020). Effects of inflation, interest and unemployment rates on economic growth: Evidence from ASEAN countries. *ABAC Journal*, 40(2), 140–155.
22. Parui, P. (2024). Fiscal expansion, government debt and economic growth: A post-Keynesian perspective. *Journal of Post Keynesian Economics*, 47(1), 117–154.
<https://doi.org/10.1080/01603477.2023.2221444>
23. Pattillo, C., Poirson, H., & Ricci, L. A. (2011). External debt and growth. *Review of Economics and Institutions*, 2(3), Article 30.
<https://doi.org/10.5202/rei.v2i3.45>
24. Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of Applied Econometrics*, 16(3), 289–326.
<https://doi.org/10.1002/jae.616>
25. Reinhart, C. M., & Rogoff, K. S. (2010). Growth in a time of debt. *American Economic Review*, 100(2), 573–578.
26. Sachs, J. (2002). Resolving the debt crisis of low-income countries. *Brookings Papers on Economic Activity*, 2002(1), 257–286.
<https://doi.org/10.1353/eca.2002.0013>
27. Smaoui, H., Boubakri, N., & Cosset, J.-C. (2017). The politics of sovereign credit spreads. *Emerging*

- Markets Finance and Trade*, 53(8), 1894–1922.
<https://doi.org/10.1080/1540496X.2016.1201760>
28. Teles, V. K., & Mussolini, C. C. (2014). Public debt and the limits of fiscal policy to increase economic growth. *European Economic Review*, 66, 1–15.
<https://doi.org/10.1016/j.euroecorev.2013.11.003>
 29. The relationship between public debt and economic growth in Jordan for the period (1990–2018). (2020). *Journal of Economics and Sustainable Development*, 11(12).
<https://doi.org/10.7176/JESD/11-12-09>
 30. Were, M. (2001). *The impact of external debt on economic growth in Kenya: An empirical assessment* (WIDER Discussion Paper No. 2001/116). United Nations University, World Institute for Development Economics Research.
 31. Yoganandham, D. G. (2023). Global economic recession and Hamas–Israel conflict affecting GDP growth, oil prices, financial markets, and Palestinian economic development: An assessment. *International Journal of All Research Education and Scientific Methods*, 11(11), 857–866.
 32. Abd Al-Daem Mohamed, A. (2024). Estimating the impact of fiscal policy on unemployment rates in Iraq during the period (2000–2020) using the ARMA model. *Scientific Journal of the Faculty of Economic and Political Studies*, 9(18), 445–496.
<https://doi.org/10.21608/esalexu.2024.379338>