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The impact of capital flight on economic development: An empirical analysis from Palestine

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Abstract

This study focused on the function of capital flight to ascertain the true impact of the phenomenon of capital flight on economic development in Palestine and aimed to analyze the short- and long-term dynamic relationship between capital flight and economic development, including other affected variables. This research employed a quantitative research design and the descriptive analysis method. The analysis uses quarterly data from 2004 to 2022. This study employed the autoregressive distribution lag (ARDL) bound testing approach. Actual data from Palestine spanning the years 2004-2022 yielded significant findings. Based on heteroskedastic dynamic regression as an ARDL panel model, important findings were reached. First, both local country fundamentals and global variables have an impact on economic development and its rates over the long term, but in the near term, global forces may be predominantly recognized as drivers. Second, the variable of interest, capital flight, has a favorable impact on tax advantages. The empirical findings revealed that the short- and long-run analyses are consistent with each other. This necessitates putting into practice a variety of tactics, from creating efficient judicial and political institutions to encouraging economic development through managing macroeconomic issues. This study provides a fresh insight for policymakers to evaluate the impact of capital flight on economic development factors when coordinating fiscal and monetary policy in Palestine. The monetary and fiscal authorities should create an efficient policy framework. Palestine must reduce and stop the outflow of cash from inside its borders to improve its capacity to pay back its loans and debts to foreign creditors.

Keywords: ARDL model, Capital flight, Economic development, Foreign reserve, Foreign direct investment, Palestine.
JEL Classification: E44; F21; G31; O47.

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Contents

Contribution of this paper to the literature
This study is considered the first to use the ARDL method to test the short- and long-term relationship between capital flight and economic development in the Palestinian context. This study contributes to the existing literature and fills the gap in the literature on financial markets, capital flight, and economic development.

1. Introduction

In Palestine, the question of whether a state can exist economically is not new. Indeed, the Zionist movement dominated the economic literature long before the establishment of the State of Israel. The message back then was clear and unwavering: a Jewish state in Palestine could exist economically, and there were no predetermined boundaries on how much more immigration Palestine could accept. In international finance, particularly in emerging markets, sovereign default risk and the capital flight phenomenon are significant factors in such countries as Palestine (World Bank, 2021). Palestine is likely to face recurring crises and concerns about default risk. In reality, several of these economies saw a sizable amount of capital flight prior to experiencing sovereign debt default, as in the cases of Argentina in 2001, Russia in 1998, and Ecuador in 1999 (Bebbington & Perreault, 1999; Rojas-Suarez, 1990). It is not a true problem for Middle Eastern nations, like Palestine, to experience capital flight; rather, it is a result of the macroeconomic effects of financial globalization (Léonce Ndikumana, 2015).

In addition to having negative effects on the rate of economic development and the nation's solvency indirectly, capital flight has significant ramifications, including a possible link to the loss of foreign reserves and increasing pressure on the local currency's depreciation. Furthermore, capital flight increases debt since domestic financial resources are seldom enough to pay off loans and fulfill other commitments. Debt repayment directly escalates the risk of a country's sovereign default, a major factor in the decline of economic growth rates and national solvency, the rise in unemployment, and the depreciation of the currency's real value (Ndikumana, 2016).

Given the hilarious turn of events where the once-believing Arabs have now become the new sceptics, what can be said today about the economic history of an Arab state in Palestine? Those who oppose the idea of a Palestinian Arab state that includes the West Bank and Gaza Strip are now asking this question in a derogatory manner. They contend that the economy would remain undeveloped and reliant, that the population pressures would be too great, and that the land area is too tiny and deficient in natural resources. To put it briefly, a situation like this might contribute to instability in the area since it is vulnerable to strong internal and foreign forces. Therefore, a solution through Jordan or another strategy that does not include the creation of an independent Palestinian state is required for those willing even to consider the idea of swapping territory for a lasting peace.

This study identifies three of the most important imbalances under the general title of economic structure, along with several other secondary structural issues that will need to be addressed right away once the occupation is lifted and a state is formed. The orientation from the outside. The isolation of the occupied territories from their traditional, and mostly natural, Arab markets, as well as the forced reorientation of the Palestinian economy towards the particular requirements of Israeli hegemony, are two of the most damaging economic effects of the protracted occupation of the West Bank and Gaza.

Due to Israel's unlimited access to the markets in the acquired areas, trade and money movements, especially imports, between the Arab nations and the occupied regions were less constrained. Administrative agencies in Israel, particularly the licensing authority, suppressed industrial growth, while the lack of access to foreign markets, including Israel, and restrictions on Arab use of water resources hampered agricultural progress. Due to the impediment to indigenous development, the occupied territories effectively became a source of inexpensive labour and an easy market for Israeli goods (just before the intifada, Israel exported nearly $1 billion worth of goods to the occupied areas, making it the second-largest single national export market after the United States). This also created a crucial dependency.

As a result, any effort to repair the Palestinian economy's external economic links would require significant changes to its production base as well as its external relations. These adjustments are likely to be costly and challenging in the early years of statehood. A further evident and highly important distortion resulting from the prolonged occupation is the deformity that has hampered the training and deployment of Palestinian laborers in the occupied regions. First, the opportunities for professional, highly skilled, and entrepreneurial workers were significantly reduced due to restrictions on private sector economic growth and the stagnation or decline in public sector activity (perhaps with the exception of the bizarre expansion of the Israeli security apparatus). As a result, a significant portion of the labour force's most productive members left the occupied areas, depriving them of a vital component for their social and economic advancement.

Even if Israel's occupation of the West Bank and Gaza Strip ends soon, which I very much doubt, it will undoubtedly impose significant restrictions and distortions on the developing Palestinian economy. Therefore, addressing the issues that arose from the occupation and attempting to do it in a way that lessens their impact and damage must be the first course of action in the new state. The embryonic state's economic issues will become evident if the political settlement takes the shape already mentioned. In this new context, the question of previous economic history loses its contextual ambiguity and gains the specificity of a hypothesis that this research may investigates. Is there enough economic potential for the new Palestinian state? Yes, it can, provided that it can get over its innate limitations and continue on a path of sustainable economic growth in a respectably short amount of time. A comprehensive national project for development and reconstruction must be created, supported by sufficient human, technical, and financial resources, as well as growth-promoting policies and enlightened, primarily liberal forces. This project must address the most critical, interconnected issues, including reorienting and restructuring the economy, accommodating a sizable refugee population, and establishing the institutional and structural framework for the new economy. In this analysis, I will study the impact of capital flight on national solvency and economic growth.

This analysis emphasizes the significance of the exodus of domestic and international capital from Palestine in determining the causes of this shortfall. In actuality, capital flight is a cyclical force that encourages the affected nations to mismanage their reserves, accumulate excessive debt, and widen both their internal and external deficits.

Because of this, capital flight and the ensuing adjustments typically signal the start of a chain of political, social, and economic upheavals that culminate in default and a loss of access to the capital market (Pastor, 1990). By making changes to monetary and fiscal policy more difficult, the phenomenon of capital flight reflects the terrible state of the domestic macroeconomy (Ndikumana, Boyce, & Ndiaye, 2012). Capital flight, according to Ndikumana (2014) reduces a nation's foreign exchange reserves, which in turn increases pressure on the exchange rate and causes the national currency to depreciate. Capital flight may also contribute to exchange rate volatility. Capital flight, essentially a leak in the overall money supply, can weaken the transmission of monetary policy. According to the conventional portfolio theory, when domestic interest rates are extremely low, investors outside search for larger returns on savings. Higher global interest rates than domestic one's cause capital flight.

An economy that is experiencing widespread capital flight is likely to see a deterioration in its fundamentals and a substantial rise in foreign debt. This results in debt default, in addition to a probable fall in the nation's solvency and economic growth rates. The 1980s difficulties with capital flight can link to numerous sovereign debt defaults in emerging nations (Pastor, 1990). Following the economic shift in the early 1990s, there was a large-scale exodus of capital from developing nations, which is still happening today amid prolonged stagnation and rising foreign debt. The causes of capital flight and its effects have been extensively studied over the past few decades (Johannesen & Pirttilä, 2016; Yalta & Yalta, 2012) but no study has yet explicitly estimated how capital flight affects economic growth and national solvency.

The growing economies around the world, particularly those in the Middle East, including Palestine for the purposes of this research, rely more on private capital flows (Asongu, El Montasser, & Toumi, 2016). Additionally, they are more susceptible to variations in capital flows and liquidity risk. A liquidity crisis can become a significant and unsolvable national solvency issue as a result of capital flight (Ndikumana, 2014). In fact, if a liquidity crisis arises, both local and international investors will want to transfer their funds to other markets, which will have the added impact of decreasing liquidity to the banking system and raising risk premiums. As a result, there is a loss of access to bond markets.

Asongu (2013) views capital flight as a crucial indicator of a nation's external vulnerability, signaling a potential resource reversal. Given this perspective, it is fair to concentrate on the effects of capital flight on economic development and national solvency, in addition to the defaults on sovereign debt, by demonstrating how capital flight, through a reduction in financial resources, may result in a higher incidence of defaults on sovereign debt. Capital flight-induced financial instability could intensify challenges associated with state debt repayment. Understanding why investors do not trust a country's fundamentals, how this might impair its financing policies, how it may influence its capacity to repay, and how it may cause a fall in economic growth rates will be among the benefits of including capital flight into the econometric model.

In contrast to conventional wisdom, government defaults can also be caused by failure to pay Gennaioli, La Porta, Lopez-de-Silanes, and Shleifer (2013) which can be observed through the phenomenon of capital flight (economic growth, national solvency, and sovereign debt). Conversely, sovereign bond price spreads are frequently used in the literature to indicate the risk of a default by the government, which was brought on by capital flight and resulted in a slowdown in economic growth and a deterioration of the nation's solvency, as mentioned in some prior literature. To achieve the study's objectives, the experimental framework focuses on using the ARDL estimation approach, which permits short-run coefficients to vary between nations while enforcing unique estimates for long-run coefficients. The information utilized was obtained from the Palestinian Ministry of National Economy and the Governmental Statistics Center in Palestine, and it spans the years 1981 to 2021. It is complex to examine the effects of capital flight and other factors on bond spreads while concentrating on a nation like Palestine.

First off, the economy of Palestine is one of the most innovative and emerging in the Middle East, and it accounts for a significant portion of the region's developing bond market. Second, many of the crises that affected the globe significantly and called for consideration in the literature began in or spread to Palestine and the Middle Eastern countries as a whole. Third, capital flight has been discussed in the literature as a resurgent issue in Palestine and the Middle East. Last but not least, data for Palestine, is considerably more plentiful, allowing for more thorough empirical research.

Because of capital flight, Palestine has seen a significant outflow of capital, which has harmed the nation's chances for economic growth, exhausted its foreign exchange reserves, and discouraged capital investments. These findings have a direct impact on expected risk and return, as well as the general investment climate. Key monetary determinants, particularly investment returns and public bonds, have gotten little attention despite the large amount of research on the relationship between capital flight and economic growth (Clement & Ayodele, 2016; Effiom, Achu, & Edet, 2020; Ogbonnaya & Ogechuckwu, 2017; Orimolade & Olusola, 2018). Given the magnitude of capital flight at the moment and the unpredictable nature of Palestine's economic growth, it is imperative to investigate these events.

The study also seeks to answer the following question: Which institutional reforms would be necessary to create a more dynamic macroeconomic environment and reduce the dependence on foreign loans and high levels of public debt that (i) keep interest rates high and (ii) only prolong the structural vulnerability of Palestine's economy?

The impact of capital flight on national solvency and economic growth has not been thoroughly studied. Despite a wealth of empirical research on the subject; this is particularly true when considering Palestine as an emerging market in the Middle East. As a result, by examining the effects of capital flight on national solvency and economic growth in Palestine, the current study aims to close this gap in the literature. Palestine was selected as a research sample to examine this phenomenon from 2004 to 2022. This study estimates the ARDL model after adjusting for a few variables, and finally examines the long- and short-term effects of capital flight on national solvency and economic growth. This study delves into the essential components of the economic development paradigm. The Granger causality test method was employed as an estimating technique to show the relationship between variables on both short- and long-term national solvency and economic growth in order to get around the possible endogeneity issue.

The main study's purpose is to clarify the capital flight from Palestine and ascertain how it affects the country's economic development process between 2004–2022. Prior to that time period, the lack of data for some measures, most notably the economic freedom index, led to its selection.

This study makes the following contributions to the literature: Firstly, this research deals with providing a theoretical foundation for the idea of capital flight, which will cover its definition, explanation of its causes, and link to economic growth. Secondly, the study uses the residual value metric to quantify capital flight from Palestine. Thirdly, this paper examines the investment environment in Palestine identify the reasons for and effects of the capital flight from the country, and the conclusion offers solutions to cope with this issue. As a notable departure from previous research, this study contributes to the academic community and Global Financial Integrity as it uses an estimate of current data provided by the Global Financial Integrity Initiative (Global Financial Integrity, 2010). The International Monetary Fund (IMF) receives balance of payments data from the Global Financial Integrity (GFI) that is analysed to identify cash flows that are illegally acquired, moved, or used. The GFI uses a robust methodology to track unlawful money movements.

The structure for the remaining sections of this paper is as follows: The theoretical backdrop and literature assessment are presented in Section 2. Section 3 describes the analytic methods, several data sources, and methodology. Apart from the additional empirical analysis, which encompasses robustness checks and diagnostic tests, Section 4 presents the empirical findings and provides a discussion. Section 5 contains concluding observations and policy implications. Section 6 offers suggestions, constraints, and future study directions.

2. Literature Review and Theoretical Background

2.1. Literature Review

Since the debt crisis of early 1980s, there have been extensive theoretical and empirical research on the influence of capital flight on economic development and national solvency. Many studies have discussed the direct effects of capital flight, the risks it poses to economic growth and national solvency, and the likelihood that a nation will experience a debt default (Gunter, 2004; Schneider, 2003a).

The present body of research on the causes of capital flight hazards to economic expansion and national solvency is not definitive. A country's capacity and willingness to repay its foreign debt might rely on a wide range of circumstances; therefore, several variables may really be needed. These elements may be found by determining the variables that have an impact on both internal and external solvency.

Factors such as the amount of public debt, interest rates, the pace of output growth, and the nation's man balances are all linked to internal solvency. On the contrary, external solvency is correlated with current account balance, liquidity indicators, and the amount of foreign currency debt (in relation to GDP or exports). our current research will utilize Palestine as a case study, as capital flight has negatively impacted its economic growth and national solvency (Badwan & Al-Qubbaj, 2024; Boyce, 1992; Boyce & Ndikumana, 2001; Ndikumana & Boyce, 2010). This is because capital flight is the explanatory variable of interest in this study.

At this point in the research, it is useful to characterize capital flight in the economy. In actuality, the phrase "capital flight" has no commonly agreed definition (Ajayi, 1997; Ndikumana, 2014; Schneider, 2003b) and may be seen from a variety of angles. Large withdrawals of assets and/or capital from a certain nation or area are a concise definition of capital flight in its broadest meaning (Ndikumana, 2014). These outflows may be "legitimate" if foreign investors frequently repatriate their cash; alternatively, they may be "illicit" if foreign investors regularly acquire money overseas and do not typically repatriate it. These unrecorded flows are neither taxable nor used by the government. Capital flight may therefore have negative effects on both economic and social growth (Schneider, 2003a).

To investigate the effects of public institutions' management of public affairs and resources on capital flight, the Palestinian market requires efficient governance and institutional changes. It likewise has the anticipated negative sign and is statistically significant at the 0.01 level. The findings suggest that improving Palestine's government could potentially decrease long-term capital flight by around 0.81%. This is due to the fact that an atmosphere that is conducive to domestic investment and political stability requires effective governance. Consequently, this implies that long-term capital flight in Palestine is caused by poor governance and management, which signal possible political and institutional instability (Al-Fayoumi, AlZoubi, & Abuzayed, 2011).

Capital flight can aggravate domestic financial crises brought on by high unemployment rates, a lack of cash owing to a slowdown in economic development, and issues with the nation's solvency. Studies and writings from the past about what affects economic growth and national solvency have led to the discovery of domestic macroeconomic factors that cause internal imbalances to build up, destabilizing factors that happen before slowing economic growth rates and weak national solvency, and signs of how things are going in the global financial markets (Edwards, 1986; Le & Rishi, 2006; Lorenzoni, 2014).

Although capital flight poses genuine hazards to imbalanced economies, it may not be the primary cause of slowing economic growth rates and the vulnerability of national solvency. Lack of control over these risks might cause nations to experience tough phases and other, more severe economic and financial catastrophes. Before, all of this, a nation really experiences a number of symptoms, such as deteriorating mismatch between its future debt commitments and its incoming revenue streams, a condition known as fiscal imbalances. In reality, depending on what caused capital flight first, the causes of these imbalances may be extremely different.

A sizable body of pertinent literature focuses on a country's capacity to meet its external commitments, which in turn derives from the phenomenon of capital flight, which slows down economic development and weakens the solvency of the nation. The capacity to repay the loan depends on the available financial resources. In order to better understand why a country is unable to pay its obligations, this emphasizes the concept of capital flight and its influence on several important macroeconomic factors.

In the scenario, changes in the global environment, trade terms, budget balance, real interest rate, and finally economic growth primarily influence capital flight's impact on the trade surplus. A balance of payments deficit might also occur from capital flight, the subsequent depletion of reserves, combined with currency devaluation. Capital flight depletes a country's foreign exchange reserves. Due to increased pressure on the exchange rate and increased volatility, this causes the national currency to devalue (Fofack & Ndikumana, 2014).

On the other hand, according to certain theories (Bernoth & Herwartz, 2021; Niels Hermes & Lensink, 2001; Hermes, Lensink, & Murinde, 2002) there is no clear-cut relationship between changes in foreign currency rates and

sovereign risk. First, it can lead to a rise in unemployment rates, a decline in exports, a rise in imports, and a rise in foreign loans, all of which have a negative impact on economic growth and national solvency.

In reality, a depreciation of the currency may improve net exports (according to the Mundell-Fleming model), which boosts the nation's competitiveness and economic growth while lowering the risks associated with borrowing money from abroad. Second, as a result of capital flight and the devaluation of the home currency, exports are cheaper and imports are more expensive, creating a surplus in the trade balance. In addition, a rise in interest rates results in less domestic investment and slower economic development (Badwan & Al-Qubbaj, 2024; Ndikumana, 2014) which raises the possibility of a fall in exports and domestic sectors as well as the exodus of significant foreign investors. Third, when a nation has more foreign currency obligations than foreign currency assets, the depreciation of the native currency may reduce the risk of default. In this case, the depreciation of the foreign currency hurts domestic borrowers, resulting in a decrease in borrowing. This domestic credit contraction raises borrowing costs, which has a negative impact on national solvency and economic growth. As a result, there is a greater danger of decline, a major slowdown in economic growth rates, and a drop in exports, all of which have a negative impact on national solvency.

As a result of undervaluing export invoices, capital flight can occur in the context of unlawful operations (Forgha, 2008). As a result, there may be a drop in export earnings, which increases the risk of accruing and being unable to pay off foreign loans, which lowers national solvency and slows economic growth.

Boyce and Ndikumana (2001) assert that capital flight causes many nations to lose more resources than debt payments. The inability to pay off foreign loans is one of the serious consequences of capital flight, according to the authors, because it restricts the ability of affected nations to pay off their obligations as a result of the phenomenon of capital flight. Capital flight increases the likelihood that a country won't be able to pay its debts, which could lead to serious economic issues like a slowdown in national economic growth and a lack of national solvency (Hermes et al., 2002).

More crucially, by examining how capital flight interacts with other macroeconomic variables, it is possible to gauge how it affects national solvency and economic progress in developing nations like Palestine. One of the biggest disadvantages of capital flight is that it can slow economic growth by lowering the resources needed to fund domestic investment (such as private savings) (Lawanson, 2007). In this perspective, a number of empirical studies (Boyce, 1992; Cerra, Rishi, & Saxena, 2008; Chipalkatti & Rishi, 2001; Pastor, 1990) demonstrate that capital flight dramatically worsens the fiscal balance by increasing the requirement for external debt.

The debt-driven capital flight hypothesis (Boyce, 1992; Cerra, Rishi, & Saxena, 2005; Cuddington, 1987; Niels Hermes & Lensink, 2001) suggests that a sizeable portion of borrowed resources are exported abroad in the form of capital flight. However, external debt has one important function: supporting investment. Therefore, the utilization of external loan resources to fund investment will decrease the longer the phenomenon of capital flight exists. As a result, capital flight through the external debt channel may cause domestic investment to drop, which would then cause economic growth to slow. As a result, with declining production, national solvency deteriorates and economic performance diminishes.

Numerous academic works address the problem of capital flight by examining the factors that contribute to it, as well as how it affects economic expansion. Many people think that the issue affects both developed and developing nations, rather than only those in poor countries. For instance, Spain had a capital flight of 97 billion euros between January and March 2012, amounting to 2.9% of its Gross Domestic Product GDP. Given the country's financial crisis, capital flight in Greece surpassed 4 billion euros in a single week. Between 1971 and 2011, Sub-Saharan Africa suffered losses of around $814 billion (Cuddington, 1986).

Under this scenario, there will be a decrease in both foreign and domestic investments, which would affect the country's potential for future success (Hodrob, 2017). Capital flight is also a result of weak local and international law enforcement, corruption, and loose regulations. It puts the stability of the country and the little financial resources that rising nations have at their disposal in jeopardy. As long as the capital flight persists, the Palestinian government's efforts to eradicate poverty and advance sustainable development will encounter obstacles. Research on illicit domestic investment outflows in reaction to anticipated internal policy decisions and political turmoil has taken several forms from the early debt crises of the 2000s and the 1980s.

The literature states that one must include investors' purpose and willingness when determining capital flight. Immigrant capital flight is defined by Deppler and Williamson (1987) as "allegations of acquiring or selling that are prompted by the owner's anxiety about the value of his assets that may be subject to losses or impairment if they continue to be invested locally." Presenting a comprehensive list of the conduits is challenging since there are several ways that capital flight can occur. Once the capital flight has started, there is no peaceful way to quickly turn things around.

People generally assume that most people are risk-averse. In other words, they choose a guaranteed return on investment. In order to increase their wealth and maximize their return on investment, they hence take all appropriate precautions to lower risks and losses. There exists a correlation between capital flight and risk aversion. In the economic literature, a number of variables, among them the following ones, have been identified as the primary channels by which capital flight in developing countries such as Palestine is transmitted:

2.1.1. Expected Local Currency Depreciation

Fear or anticipation of currency depreciation is a prominent cause of capital flight in major emerging economies like Palestine. An asset with the potential to lose value is something that no investor, domestic or foreign, wants to possess. Capital outflows may result from such as rumors or concerns about an imminent devaluation (Schneider, 2003b). High expectations for devaluation are a contributing factor to economic problems these days, as unfulfilled client savings withdrawals might create unstable financial conditions. This kind of situation usually arises when export prices for commodities fluctuate and the local financial market's currency rate is unstable. An overvaluation of the currency rate implies that market participants would anticipate a future decline in value. Due to depreciation, imported products would initially cost more than domestic ones. To avoid more losses, many would decide to save their money in other economies, which will result in capital flight.

2.1.2. Capital Control

Capital controls also run the risk of undermining confidence in the local financial system and guaranteeing that funds moved to rich countries would not return. Capital restriction encourages the black market for foreign exchange and other costly evasion techniques, as shown in Palestine, where the number of bureaus de change operators is on the rise. Businesses that import and export may be able to export cash by inflating import values or understating export revenues. When the fixed exchange rate regime collapsed prior to 1973, the majority of developing countries and the US resorted to capital control. By preventing the already-flew capital flight from returning, this move lowers and diminishes investor trust in the local banking sector (Uguru, 2016). Another alternate strategy to reduce capital flight is to maintain the country's currency's discount to other currencies, especially the US dollar, or maintain its high value while increasing the national lending rate to make the currency more desirable to retain. Raising interest rate has the drawback of increasing freight costs for needs, which may limit capital formation flight (Ahmed & Sahto, 2015; Badwan & Al-Qubbaj, 2024).

2.1.3. Lending Organizations

According to Badwan and Al-Qubbaj (2024) a considerable proportion of developing economies lent money to international financial institutions and other lending organizations for development purposes. Unfortunately, capital flight returns a sizable amount of this investment to the lenders. Thus, the general public bears the cost of interest and debt repayment. Moreover, foreign debt typically denotes a nation's weak performance or an unfriendly investment climate, which promotes capital flight (Badwan & Al-Qubbaj, 2024; Uddin, Yousuf, & Islam, 2017). External borrowing is the primary source of funding for most illicit capital transfers. The country of origin may not necessarily document transactions between financial institutions. As mentioned before, the government raises taxes on the general population to cover the cost of its foreign borrowing. People try to store their money in other economies in order to avoid paying such high taxes, which results in capital flight.

2.1.4. Precious Metals

Precious metals and collectibles are important forms of collateral transfer in addition to artwork. Palestinians can use local currency to pay for jewels, diamonds, precious metals, and other similar goods. Not only are these priceless metals sent abroad, but their value stays steady or even increases (Ubi & Bassey, 2017). In foreign currencies, these products typically have high market prices. Policies in the public sector frequently tend to limit, control, or outright prohibit the import and export of certain products. Transporting these commodities across borders or worldwide typically involves organized smuggling and other illegal economic operations (Tabassum, Quddoos, Yaseen, & Sardar, 2017).

2.1.5. Foreign Aid

It is common practice to provide financial or foreign assistance to support infrastructure development projects or end poverty in fragile nations. Unfortunately, it is difficult for the economy to retain prosperous public and other private enterprises because dishonest public officials, non-governmental organizations, and company owners look into various ways to transfer this foreign support to other nations via capital flight.

2.1.6. Trade is Invoicing

Trade and invoicing are the most common and popular ways to smuggle capital resources into other nations. Due to their size, influence, and standing in the global economy, multinational businesses are the main actors in this type of illicit wealth transfer. Because of their existence and operational capabilities, they are able to carry out intra-subsidiary transfers across national borders, which encourages and facilitates capital flight. According to Salandy and Henry (2017) in this case, importers are expected to be analytically involved in over-invoicing, whereas exporters would be under-invoicing.

2.2. Empirical Literature Review

Both developed and developing nations have published numerous empirical studies examining the effects of capital outflows on economic development and other stock market performance, with differing conclusions (Al-Basheer, Al-Fawwaz, & Alawneh, 2016; Badwan & Al-Qubbaj, 2024). In Trinidad and Tobago's tiny resource-based economy (1971–2011), Salandy and Henry (2017) investigated and compiled the relationship between domestic investment, economic growth, and capital flight.

The results show that capital flight is a significant problem impeding sustainable development locally. Cheung, Steinkamp, and Westermann (2016) examined illicit capital flows in China to gain a better understanding of how Chinese money interacts with the rest of the world. The outcome demonstrates how the crisis event impacted China's capital flight pattern as well as its root causes. Moreover, the comprehension of China's capital flight and its fundamental reasons remains a challenge, suggesting that its impact has diminished in the post-2008 population.

Several empirical studies have been carried out to determine the significance of recognized institutional and economic components (push and pull factors) that contribute to capital flight. Capital flight, for example, is triggered by GDP growth rates in Bangladesh (Alam & Quazi, 2003). Lawanson (2007), on the other hand, revealed that the GDP growth rate had a significant short-term negative influence on capital flight from Nigeria using a portfolio choice approach using data from 1970 to 2001. The research also revealed that Nigeria's capital flight is primarily driven by an increase in the real interest rate differential, an increase in inflation, and a higher foreign debt-to-GDP ratio.

According to Beja, Junvith, and Ragusett (2005) increases in foreign loan stocks are the principal driver of capital flight in Ethiopia, Sub-Saharan Africa, and South Asia (Indonesia, Malaysia, the Philippines, and Thailand). Furthermore, using M2/GDP and M3/GDP as proxies for financial development, Collier, Hoeffler, and Pattillo (2001) and Ndikumana and Boyce (2003) found that financial development had little effect on capital flight in Sub-Saharan Africa. However, Raheem (2015) re-examined the factors that impact capital flight in twenty-eight Sub-Saharan African countries and discovered that M2/GDP had a positive and significant correlation.

Le and Zak (2006) developed a portfolio choice model that connects return differentials, risk aversion, and three risk categories: policy variability, political unpredictability, and economic risk. During a sixteen-year period, all three types of risk had a substantial impact on capital flight when calculating the equilibrium capital flight equation for a panel of forty-five developing countries. Political instability appeared to be the most important quantitative factor influencing capital flight.

Al-Fayoumi et al. (2011) observed a spillover effect from capital flight the year before. This implies that the quantity of capital flight in the previous year influences the amount of capital flight in the current year. The literature study suggests that there are several variables that impact capital flight; nevertheless, the relevance of these elements varies for each country. Therefore, the purpose of this study is to assess the factors that drive capital flight in Palestine. Asongu and Amankwah-Amoah (2018) used panel data from 37 African states from 1996 to 2010 and 2018 to assess the amounts of military spending that mitigate the impact of terrorism on capital flight. Using regular least squares, fixed effect analysis, the general technique of moment, and the quantitative approach all led to same conclusion: to counteract the negative effect of terrorism on capital flight, there needs to be a large military budget deficit of 4.224 to 7.363 percent of GDP. Furthermore, Ahmed and Sahto (2015) investigate the link between capital outflows and their drivers, which include the study's core variables, as well as the rate of GDP growth and inflation. The residual approach was used to calculate the model coefficients for the years 1971-2011, and the results show a long-term link between the variables as well as a negative association between capital flight, exchange rate, and other parameters.

To assess the effects of financial flight and its causes on economic development (2001-2021), Lawal et al. (2017) utilize the autoregressive distributed lag (ARDL) model to analyze data gathered over time. The findings indicate that the variables are long-term associated and that capital flight has had a detrimental influence on the state's economic growth over the study period. Liew, Mansor, and Puah (2016) look at the macroeconomic determinants that have influenced Malaysia's capital flight over the last decade. (1980-2010). Combining this study's model with the World Bank's approach for monitoring capital outflows reveals a long-term relationship between the variables (World Bank, 2010).

According to Almounsor (2017) the author employs a residual technique to account for the potential cost of unregulated money to society in the form of stopped economic progress, and provides new estimates of illegal capital flight in Saudi Arabia from 1971 to 2015. The results show that capital flight is detrimental to economic progress. To identify early access to capital outflows from a new perspective, a collection of 37 African states is examined using the Financial Development and Structure Database (FDSD) and African Development Indicators (ADI) (1980-2010) (World Bank, 2010). According to the World Bank (2020) findings, nations that export petroleum and those involved in armed conflict have a considerable influence on absolute and conditional convergence.

Orimolade and Olusola (2018) used the World Bank's residual approach to assess the impact of capital flight on Palestinian economic development. The study uses the "Autoregressive Distributed Lag" research model to find coefficients for study data from several years (2001-2021). It finds a weak link between capital flight and economic growth.

Obidike, Uma, Odionye, and Ogwuru (2015) examine how capital flight affects economic development from 2000 to 2015, "using monthly time series data spanning many decades." The authors' ARDL model-based study reveals that capital flight has a significant negative impact on Palestinian economic growth. Johannesen and Pirttilä (2016) critically analyze the procedures used to collect data on illegal capital transfers and financial flight from poor nations. "The results suggest that the level of capital flight from developing nations remains problematic for the evolution of civilization. To estimate the influence of institutional governance and corruption indicators on capital outflow, Osei-Assibey, Domfeh, and Danquah (2018) "use panel data from 32 Sub-Saharan Africa (SSA) countries during a sample period including the years 2000-2015. "from 2000 until 2012." The data show that there is a substantial link between capital flight from "SSA" and a positive perception of corruption. It implies that the continent encourages capital outflows, impeding long-term economic success. "We employed time series data to examine the effect of capital flight on economic development in the Franc zone between 2000 and 2013, and the results were conflicting," says Ndiaye (2014). The effects are varied, with 15 of the franc zone's member countries benefiting from capital flight while 5 suffer negative impacts. One argument suggests that trade fraud, foreign aid, and external debt may have a greater impact than positive capital flight.

The author also investigates the impact of macroeconomic determinants on capital flight, limiting the estimation to a short-run analysis to avoid any potential difficulties raised by ambiguity about the direction of the influence of plausible long-run causes (Ogun, 2017). The study found that trade imbalances, nominal exchange rates, and capital regulations all have a considerable impact on short-run capital flight. Ndikumana (2017) claims that "since then, capital flight has cost the Asian continent more than USD 1 trillion, a huge amount that exceeds all of the loans and financial assistance the continent got during the same period." If the region had saved and used this significant amount of money for worthwhile projects, it would be in a better position to meet the Sustainable Development Goals (SDGs).

Uddin et al. (2017) "use yearly time series data covering the years to analyze the determinants impacting capital flight in Bangladesh (1990-2016), and the authors apply the "OLS" estimating approach and discover that the primary drivers of capital flight in Bangladesh are (ED, FDI, FR, IRD, and CA) surpluses are all examples of financial variables." The supplementary finding shows a strong positive relationship between the change in foreign debt, capital flight, and the difference in interest rates.

Clement and Ayodele (2016) "survey the impacts of capital flight on financial development utilizing time arrangement information from the period (1980-2014), and by Meng (2016) utilizing "OLS" and the cointegration method as expository strategies, the result appears that capital flight influx incorporates a positive relationship with the trade rate and financial advancement all through the time beneath talk." Onyele and Nwokocha (2016) "studied the impact of capital flight on destitution in Palestine utilizing time arrangement information crossing the long time (1986-2014), and the Johansen co-integration test and mistake adjustment show discoveries illustrate that the factors have a long-run harmony association in which capital flight incorporates a positive interface with destitution, which moderates financial development in countries where it happens over time."

Ubi and Bassey (2017) "examine the relative impacts of capital flight and remittances on poverty in Palestine using time series data from (2000-2014), and the authors estimate the model coefficients using both a cointegration approach and an Error Correction Method ECM technique." The findings show that the variables have a long-term relationship, and that capital flight hurts poverty over the study period. Asongu et al. (2016). "The General Method of Moment (GMM) approach was adopted to assess the influence of governance on capital flight in 33 Asian countries during the period (1999-2013), and the results reveal that economic governance enhances capital flight while political stability and accountability decrease it." Eliminating corruption is the preferred approach for governments to stop capital flight.

Lawanson (2014) "investigates the direct and indirect effects of debt and capital flight on the economies of 16 West African nations through processes involving capital and budgeting, and the author evaluates time data from the period (2000-2015) employing the fixed effects and (GMM) estimate approaches to demonstrate how results alter when economic difficulties such as exogenous variables and dynamic panel biases are taken into account." The findings show that capital flight improves financial stability but has a significant negative impact on investment, reducing private capital flows. The coefficients of capital flight show that an increase in capital flight causes a 0.11% drop in investment.

Uguru (2016) looks at how capital flight affects tax revenue using annual time series data based on regression analysis. The findings show that capital has a significant negative impact on national tax collection. From an agricultural standpoint, Mpenya, Metseyem, and Epo (2015) "use data from the World Bank over time to analyze and analyze the connection between the economic growth and trade mis-invoicing-induced capital flight in the Cameroonian natural resource (Oil and Wood) sector. (1995-2010), and the result shows that capital flight negatively impacted Cameroon's economic development and that a large portion of it originates from the natural resources sector. "Usman and Arene (2014) "used time series data spanning (2000-2018) to evaluate the influence of the capital war and its macroeconomic causes on agricultural growth, and the authors' use of the cointegration test and regression approach provided results revealing a weak correlation between capital flight and agricultural growth."

To determine how much capital flight influences the effect of foreign debt on economic development in a subset of sub-Saharan African nations, Agyeman, Sakyi, and Oteng-Abayie (2022) construct an enhanced endogenous economic growth model. The estimates were conducted using data from 2000 to 2015, utilizing a dynamic system generalized method of moments approach. It was determined that both capital flight and foreign debt had a statistically significant negative influence on economic growth. A modest degree of capital flight has no discernible influence on the detrimental impacts of foreign debt on economic development, according to the results of the marginal effects analysis. On the other hand, a high rate of capital flight makes the detrimental effects of foreign debt on economic expansion worse. Based on the results, we draw the conclusion that lowering capital flight in sub-Saharan Africa should be the main goal of initiatives to support effective external debt management.

Travelling is an infrequently researched conduit for capital flight, and Wong (2021) offers evidence for it. Compared to counterparty figures, China's outbound departure data, and other nations' norms, the country's travel expenditures increased to an extraordinarily high level during the historic period of massive net capital outflows between 2014 and 2016. The findings imply that Chinese consumers have been using the travel channel to take advantage of China's recently more liberalized capital account to move money outside during times of high economic instability.

Using a sizable sample of 2711 Chinese private companies, Wu, Wang, Fang, Tsai, and Xia (2022) investigated the connection between family business engagement and capital flight. The findings imply that there is a positive correlation between capital flight and family participation. The beneficial impact of family participation on capital flight is lessened by political ties. The study looks at how local and political connections affect the business environment and how their context affects the moderating effects. Political ties lessen the beneficial impact of family participation on capital flight. When it comes to capital flight and outward foreign direct investment (OFDI), there are differences in these consequences. However, capital flight could result in a decrease in tax revenues needed to pay back public debt, seriously slowing economic development rates and jeopardizing the sustainability of the country. The next parts attempt to experimentally analyze this relationship after outlining the theoretical concerns regarding the influence of capital flight on economic development and its rates, national solvency, the inability to repay international loans as well as domestic obligations, and debt aggravation. The next section offers some specifics on the data and methods utilized as a first step.

3. Data and Methodology

3.1. Data Sources and Description

Specifically, time series data from secondary sources during the years (2004-2022) are used in this study. Only the World Bank's archived Global Financial Integrity (GFI) and World Development Indicators (World Bank, 1985) provide information on capital flight. Real GDP, foreign currency reserves, foreign debt, and investment growth in Palestine are all provided by the Palestine Monetary Authority's statistics bulletin (PMA).

The time series for economic growth in Palestine relates to data and information about the economy of the West Bank specifically, and it was difficult for us to extract data and information about the Gaza Strip due to the limited and scarce data, so we excluded the Gaza Strip from the study due to the lack and scarcity of data and the lack of sufficient reports and disclosures for the necessary statistical analysis. Therefore, we presented coefficients for a model estimated in the short and long term for the West Bank region specifically.

Capital flight is a result of return difference, relative risk, and portfolio diversification. These restrictions restrict the amount of money available for domestic investment, which obstructs the growth of the economy. This work's study uses the Autoregressive Distributed Lag Model Estimated model since other approaches such as the Ordinary Least Squares Regression OLS, Johansen co-integration, Vector Error Correction Model VECM, ECT, and Structural VAR Models SVAR models have received more attention in the literature (Johansen, 1988; McNown, Sam, & Goh, 2018). One of the most obvious signs of capital flight is the asset method, which counts the total number of properties owned by non-residents in foreign banks.

3.2. Methodology and Model Specifications

3.2.1. ARDL-ECM Approach

A heterogeneous dynamic panel regression model was built up as a panel-ARDL model while the ECM estimate approach was suggested by Pesaran, Shin, and Smith (1999). Pesaran, Shin, and Smith (1997) were utilized in order to experimentally analyze this link exhibited in Equation 1 in Palestine. It is suggested as a bridge between the estimate processes for ECM and dynamic fixed effects (DFE). The average coefficients extrapolated from the discrete equations make up the ECM. Only individual effects (which may be random or fixed) allow the (DFE) estimator to account for sample heterogeneity, whereas the coefficients of exogenous variables are considered to be constant.

The fact that ECM permits variable short-run coefficients while imposing unique long-run coefficients is a beneficial feature. This indicates that in the short term, variables unique to each nation in the Middle East as well as other ones may be crucial. In the long run, markets are expected to include economies with the same characteristics, but in the near term, country-specific and other variables are likely to have dominating and varied impacts, making the (ECM) approach economically viable. Researchers like Léonce Ndikumana (2015); S. Asongu et al. (2016); Asafu-Adjaye, Byrne, and Alvarez (2016); Kennedy (2014) and Bangake and Eggoh (2012) are using this method more and more. The study provided a development model that has been significantly expanded to include important factors pertinent to the application, specifically to the Palestinian economy, in addition to a model specification that integrates real Kapital Flight KF, capital flight, foreign reserve, external debt, and domestic investment into a single Autoregressive Distributed Lag Model (McNown et al., 2018).

$$Inspread = f(Flight, Z) \qquad (1)$$

The fundamental premise of this experimental study is that capital flight has a detrimental effect on economic growth and national solvency in Palestine. Both national and international issues have an impact on the latter. In economic and financial crises like slowing economic growth, weak national solvency, the inability of the nation to pay its foreign debts, rising exports, falling imports, the currency losing real value, and rising inflation rates, capital flight frequently causes a rise in national financial distress. By incorporating capital flight into our model, we can better understand the factors that contribute to investors' loss of faith in a nation's fundamentals and gauge the negative effects on financing policy. Examples of a country's failure to service its foreign debt are not always dictated by willingness to pay, contrary to the conventional literature on economic development, national solvency, and external debt (Hilscher & Nosbusch, 2010).

In fact, capital flight represents the situation in which the government is unable to pay its debts as one of the causes of declining economic growth, weak national solvency, and inability to repay external debts (Broner & Ventura, 2011; Brutti, 2011; Gennaioli et al., 2013; Guembel & Sussman, 2009). The linear equation (f) the direct impact on GDP is determined by capital flight and a group of additional variables that explain it that are included in the model) relies on the prior research, particularly significant initial research like (Edwards, 1986; Min, 1998). It also takes export, import, and bond price differences as an indicator of the risk of capital flight on economic growth and national solvency.

$$Inspread_{it} = \sum_{j=1}^{p} \lambda_{ij} lnspread_{i,t-1} + \sum_{j=0}^{q} \gamma_{ij} X_{i,t-j} + \alpha_i + \varepsilon_{it} \qquad (2)$$

$X = (k \times 1)$ explanatory variables vector, $\alpha_i$reflects a specific fixed effect, λ_{ij}scalars, γ_{ij}reflect $(k \times 1)$ are coefficient vectors and ε_{it}describe the error terms which are independently distributed across i with 0 variances σ_i^2 and means. According to Pesaran et al. (1999) model (2) can be rearranged into an error correction model specified as follows and can be estimated employing the PMG procedure:

$$\Delta Inspread_{it} = \emptyset_i\left(Inspread_{i,t-1} - \beta_i X_{it}\right) + \sum_{j=1}^{p-1} \lambda_{ij} \Delta Inspread_{i,t-j} + \sum_{j=0}^{q-1} \gamma_{ij} \Delta X_{i,t-j} + \alpha_i + \varepsilon_{it} \qquad (3)$$

$$\emptyset_i = -(1 - \sum_{j=1}^{p} \lambda_{ij})\, \beta_i = \sum_{j=0}^{q} \frac{\gamma_{ij}}{1 - \sum_{j=1}^{p} \lambda_{ij}} \lambda_{ij} = -\sum_{m=j+1}^{p} \lambda_{im}\; j = 1, \ldots p-1\; \gamma_{ij}$$

$$= -\sum_{m=j+1}^{q} \gamma_{im}\; j = 1, \ldots q-1\; i = 1, \ldots N$$

This represents the error-correcting term in Equation 3. It is anticipated that the associated calculated coefficient will be statistically significant and negative. A typical value denotes the absence of any support for a long-term partnership. The inverse of the absolute value of the vector $\emptyset_i = 0$, which depicts the long-term impacts of the explanatory factors on the spreads, provides the speed of adjustment estimate for the absolute value of $\emptyset_i$. The vector $\beta_i$displays the country-specific short-term coefficients that demonstrate how each country's spreads react to applied shocks for the >order to verify the reliability of the findings related to the study's main variable $(Flight)$, 10 specifications were estimated as part of the estimation approach. The last specification comprises virtually all of the explanatory variables. However, each specification sets this main explanatory variable as a permanent one to which another explanatory variable is added every time. The short-term coefficients for each nation will then be estimated using this thorough specification.

The study creates an extensive development model that meets key performance indicators that are relevant to the growth prospects and national solvency measures of the Palestinian economy. Additionally, the model specification integrates real GDP with the ARDL model, taking into account factors such as capital flight, foreign reserve, external debt, foreign direct investment, debt to assets ratio, interest coverage ratio, equity ratio, debt to equity ratio, and domestic investment (McNown et al., 2018). In its practical version, the model has the following structure:

$$GDP = f(CF, FR, ED, FDI, DI, DA, IC, ER, DE) \quad (4)$$

It is as follows to express the method algebraically:

$$GDP = \alpha + \beta_1 KF + \beta_2 FR + \beta_3 ED + \beta_4 FDI + \beta_5 DI + \beta_6 DA + \beta_7 IC + \beta_8 ER + \beta_9 DE + \varepsilon \quad (5)$$

The real GDP serves as a reliable gauge of economic growth. The following is a crude formula for calculating national solvency: The symbols ED stand for external debt, FDI is for foreign direct investment, DI is for domestic investment, and CF represents for capital flight on the foreign reserve. The symbols DA, IC, ER, and DE stand for debt to assets, debt to equity, and interest coverage, respectively. The intercepting function is represented by α, and the error term is denoted by β_1–β_9 = μ, which is the coefficient of the explanatory variables.

The relationship between capital flight and Palestine's rate of economic growth as well as the impact of capital flight from outside Palestine on growth over the research period are both measured. This is also the case, according to the leadership models that we have decided to use in our research. We eliminated the lag in asset holdings while estimating the capital flight (CF) model since there were insufficient observations in our data sample. Lensink, Hermes, and Murinde (1998) conclude that our equation and model appropriately capture the implications of the relative rates of return. The model serves the following purpose:

$$CF_t = \alpha_0 + \alpha_1\pi_t + \alpha_2 r_t + \alpha_3(r*_t + x_t) \quad (6)$$

Where $\alpha_1 \gtrless 0, \alpha_2 < 0, and\ \alpha_3 > 0$ are the estimated amounts of the coefficients, which reverse the balance of payments accounting standard since capital outflows are measured as positive values of KF. Moreover, capital flight is analyzed using the following metric:

$$CF_t = \Delta D_t + FI_t - CA_t - \Delta R_t \quad (7)$$

The ΔD denotes the variation in external debt, the ΔR denotes the shift in foreign reserves, the CA denotes the current account deficit, and the FI stands for net foreign investment flows, which include both portfolio equity and foreign direct investment flows. The previous paragraph discussed the concept, methods of measurement, and the theoretical implications of capital flight on the process of economic growth. This study aims to quantify the impact of capital flight on Palestine's national solvency and economic growth throughout the study period (2004–2022).

It is important to remember that prior studies have yielded capital estimates between 2004 and 2022. This made it possible for the researchers to compare revealed flows with documented foreign exchange uses in order to determine the entire amount of capital flight from 2020 to 2021. The World Bank (1985) developed the residual technique to quantify capital flight, which we can assess using the following model:

$$CF_{it} = \Delta DEBT_{it} + FDI_{it} - [CA_{it} + \Delta Reserves_{it}] \quad (8)$$

Where:

CF_{it}: *Amount of capital flight in USD.*

$\Delta DEBT_{it}$: *Amount of change in external debt balances.*

FDI_{it}: *Net foreign direct investment inflows.*

CA_{it}: *Current account balance.*

$\Delta Reserves_{it}$: *Amount of change in the stock of accumulated foreign reserves.*

As a result, the volume of capital flight numbers ultimately reflects the values displayed in Table 1. According to the estimations, until 2022, the amount of capital flight was approximately $736 million, representing a 5.2% annual growth from the prior year.

Table 1. Estimated capital flight from Palestine 2004-2022 (Million USD).

Year	Change in the external debt balance	Net foreign direct investment	Current account balance	Change in the stock of foreign reserves	Amount of capital flight	Rate of change	GDP change %	GDP per capita USD
2004	231	145	648	399	651	5.3	13.08%	1.422
2005	256	257	540	436	768	6.2	8.54%	1.544
2006	248	452	342	511	821	7.4	1.71%	1.570
2007	369	622	731	379	639	8.5	6.00%	1.664
2008	345	294	844	459.4	760	6.5	22.29%	2.035
2009	283	386	278	375.9	618	5.6	7.69%	2.192
2010	421	632	527	394.5	645	7.7	16.67%	2.557
2011	266	421	763	498	731	3.4	12.66%	2.881
2012	374	485	597	542	608	4.1	6.48%	3.076
2013	399	674	680	699	731	7.5	8.08%	3.315
2014	531	642	285	374.6	642	9.3	1.11%	3.352
2015	-106	478	539	286.1	430	6.4	-2.39%	3.272
2016	165.7	266	730	528	853	8.4	7.81%	3.528
2017	311.8	241	867	636	903	6.9	2.63%	3.260
2018	281	181	893	742	922	7.8	-1.60%	3.562
2019	387	163	683	778	944	9.8	2.65%	3.657
2020	237	186	765	843	952	5.2	-11.58%	3.234
2021	361	137	887	822	941	8.1	13.76%	3.679
2022	462	188	859	923	736	5.2	3.01%	3.789

Source: Palestinian monetary authority data (PMA)and WORLD BANK national accounts data, and the organization for economic cooperation and development OECD national accounts data.

Table 2 provides an overview of the variables employed in the current study along with a description.

Table 2. Descriptive statistics.

Variables	Description	Mean	Median	Standard deviation	Minimum	Maximum
Constant	Real per-capita income (Constant US$)	2.256	7.058	19.044	6.035	81.752
Capital flight	Capital flight in percentage of GDP	4.062	9.743	11.336	22.853	43.818
Change in the external debt balance	External debt stock (Percentage of GDP)	11.472	17.748	13.471	3.011	16.283
Net foreign direct investment	Net inflows of FDI (% of GDP)	7.803	10.552	12.006	4.227	19.363
Current account balance	Current account balance (Percentage of GDP)	22.195	26.113	6.044	7.368	21.635
Change in the stock of foreign reserves	Foreign reserves stock changes (Percentage of GDP)	16.810	33.208	5.026	10.256	28.558
Amount of capital flight	Capital flight (Percentage of GDP)	5.047	12.226	13.590	-15.842	42.736
Rate of change	Rate of change (Percentage of GDP)	17.702	37.052	5.063	8.907	23.406
Debt to assets ratio	Debt to assets (Percentage of GDP)	5.074	8.974	11.310	6.088	36.953
Interest coverage ratio	Interests coverage (Percentage of GDP)	3.942	7.980	2.975	3.785	25.583
Equity ratio	Equity ratio (Percentage of GDP)	17.845	27.832	8.643	2.006	18.642
Debt to equity ratio	Debt to equity (Percentage of GDP)	12.894	25.960	7.152	5.583	63.961

A number of adjustments to this method have been put forth, such as the Moriarty, Kimball, and Gay (1983) and Perlowski (1992) which define capital flight as the accumulation of residential overseas assets by the state's non-banking sector and prohibit the state's financial system and finance organizations from acquiring short-term foreign investors. Equation 9 applies the current method to the assessment of capital flight, using the following method:

$$CF_t = \Delta D_t + FI_2 - CA_t - \Delta R_t - SB_t \quad (9)$$

SB refers to the current state of the financial system as well as the short-term financial currencies of financial institutions. A further component of the ARDL technique (McNown et al., 2018) is determining the short- and long-term relationship between the variables. The general framework of the ARDL model is obtained by transforming and expressing Equation 10 as follows:

$$\Delta GDP_t = \alpha_0 + \sum_{i=0}^{\kappa} \beta_{1i}\, \Delta GDP_{t-1} + \sum_{i=0}^{\kappa} \beta_{2i}\, \Delta CF_{t-1} + \sum_{i=0}^{\kappa} \beta_{3i}\, \Delta FR_{t-1} + \sum_{i=0}^{\kappa} \beta_{4i}\, \Delta ED_{t-1} + \sum_{i=0}^{\kappa} \beta_{5i}\, \Delta DI_{t-1} + \sum_{i=0}^{k} \beta_{6i} \Delta DA_{t-1} + \sum_{i=0}^{k} \beta_{7i} \Delta IC_{t-1} + \sum_{i=0}^{k} \beta_{8} \Delta ER_{t-1} + \sum_{i=0}^{k} \beta_{9} \Delta DE_{t-1} + \beta_{10} GDP_{t-1} + \beta_{11} CF_{t-1} + \beta_{12} FR_{t-1} + \beta_{13} ED_{t-1} + \beta_{14} DI_{t-1} + \beta_{15} DA_{t-1} + \beta_{16} IC_{t-1} + \beta_{17} ER_{t-1} + \beta_{18} DE_{t-1} + \varepsilon_{it} \quad (10)$$

For each of the explanatory variables, (k) is the total number of optimal lag duration that would satisfy the Hannan-Quinn (HQC), Schwarz Bayesian (SBC), or Akaike (AIC) criteria. Is Δ the initial difference operator; β_{1i}, β_{2i}, β_{3i}, β_{4i} *and* β_{5i} represent the algorithm's short-run dynamics, while the long-run dynamics are represented by β6, β7, β8, β9, and β10 dynamics. The long-term equilibrium condition is the primary concern for the ARDL model employed in the empirical model estimating process (McNown et al., 2018), when the dependent variable coefficient in the various short-term estimated delays amounts to less than one. Equation 11 is used to determine the Error Correction Model (ECM) and Error Correction Term (ECT), also known as the short-term dynamic, and it is used to calculate the consequences of capital flight in Palestine:

$$\Delta GDP_t = \alpha_0 + \sum_{i=0}^{k} \beta_1\, \Delta GDP_{t-1} + \sum_{i=0}^{k} \beta_2\, \Delta \varphi_{t-1} + \beta_3\, ECM_{t-1} + ECT_{t-1} + \varepsilon_{2t} \quad (11)$$

It demonstrates how rapidly adaptation variables reach a long-run equilibrium following a short-run shock. The error term is ε_{2t}, the array of unrelated variables is φ_{t-1}, and the error correction term is ECM_{t-1}.

4. Empirical Findings and Discussion

In response to the long-run information loss from regression analysis with the initial difference variables and their removal, we assess the likelihood of cointegrating correlations between the nonstationary time series variables. When a cointegrating vector of variables is available, a vector error correction model may be utilized to do an "OLS" regression while preserving the long- and short-run dynamics (Enders, 1995; Meng, 2016). McNown et al. (2018) use the ARDL model to determine the cointegrating long-run connection between the non-stationary variables.

The variables undergo evaluations for stationarity and sequence of integration in order to ensure that the estimates yield accurate results. Unit root testing is needed to check how stationary the variables are and stop wrong regression, keeping in mind what we've already talked about and the creation of the error correction model that uses time-series data variables. There are a multitude of stationarity testing techniques with differing levels of advancement. Escobari, Garcia, and Mellado (2017) used the Phillips-Perron "PP" test and the Augmented Dickey-Fuller ADF (Dickey & Fuller, 1979) to confirm the results. Tables 3 and 4 present the findings from the two-unit root tests.

Table 3. Unit root test of augmented Dickey-Fuller.

Variables	Test of augmented Dickey-Fuller							
	Level				First difference			
	T-stat	Critical value	Probability	Order integration status	T-stat	Critical value	Probability	Order integration status
Constant	-1.988***	-1.860	0.253**	I (0)	-3.894**	-1.688	0.00	I (1)
GDP	-1.464**	-1.379	0.542***	I (0)	-5.442***	-1.003	0.00	I (1)
CF	-1.387**	-1.760	0.312**	I (0)	-6.351***	-1.005	0.00	I (1)
FR	-1.784***	-1.691	0.258**	I (0)	-7.472***	-1.007	0.00	I (1)
ED	-1.572***	-1.548	0.185*	I (0)	-11.631***	-1.004	0.00	I (1)
DI	-1.297**	-1.493	0.253**	I (0)	-17.231***	-1.065	0.00	I (1)
DA	-1.074**	-1.642	0.574***	I (0)	-6.431**	-1.005	0.01	I (1)
IC	-1.124**	-1.565	0.641***	I (0)	-14.424***	-1.002	0.00	I (1)
ER	-1.161**	-1.228	0.742***	I (0)	-3.382**	-1.008	0.02	I (1)
DE	-1.760***	-1.242	0.622***	I (0)	-11.486***	-1.009	0.00	I (1)

Note: *indicates a 1% significance level; ** indicates a 5% significance level; *** indicates a 10% significance level.

Table 4. Phillips-Perron unit root test.

Variables	Phillips-Perron test							
	Level				First difference			
	T-stat	Critical value	Probability	Order integration status	T-stat	Critical value	Probability	Order integration status
Constant	-2.107***	-1.484	0.362**	I (0)	-2.098**	-1.396	0.00	I (1)
GDP	-1.830**	-1.008	0.584***	I (0)	-7.885***	-1.001	0.00	I (1)
CF	-1.519**	-1.005	0.731***	I (0)	-11.008***	-1.001	0.00	I (1)
FR	-1.769**	-1.004	0.064*	I (0)	-15.275***	-1.003	0.01	I (1)
ED	-1.424**	-1.002	0.439**	I (0)	-5.452***	-1.004	0.00	I (1)
DI	-1.970**	-1.006	0.096**	I (0)	-4.876**	-1.033	0.00	I (1)
DA	-1.863**	-1.005	0.144**	I (0)	-8.530***	-1.007	0.00	I (1)
IC	-2.313***	-1.567	0.375**	I (0)	-3.121**	-1.452	0.00	I (1)
ER	-1.231	-1.003	0.428**	I (0)	-10.005***	-1.004	0.00	I (1)
DE	-2.274***	-1.622	0.635***	I (0)	-9.068***	-1.388	0.00	I (1)

Note: *indicates a 1% significance level; ** indicates a 5% significance level; *** indicates a 10% significance level.

Tables 3 and 4 provide the regression model values from the (ADF and PP) studies. The two statistically significant estimates, which comprise an interception and a propensity, are identical. The findings of both tests indicate that all variables, with the exception of capital outflows (CF), are consistent at the first differentiation utilising interception and a tendency. CF is constant in the PP and ADF tests at the 5% level at both levels and the initial differentiation. This leads to the integration and addition of some CF and Foreign Reserve FR variables into the mixture, while other variables remain constant following initial discretization. According to McNown et al. (2018) this is essential for assessing the long-term association with the $ARDL$ proposed model.

4.1. Co-integration Approach Bound Test

Real GDP, capital flight CF, currency reserves FR, debt levels ED, debt to assets DA, interest coverage IC, equity ratio ER, debt to equity ratio DE, and investment must be shown to have a long-term connection because the variables have both continuous and shifting orders of integrating DI. These are the necessary data for the Autoregressive Distributed Lag bound analysis:

Table 5. Bound test results.

F-statistics = 4.46*		
Bound for critical value	**Reduced bound**	**Greater bound**
10%	2.62**	2.48*
5%	2.81**	2.97**
2.5%	2.93**	3.47***
1%	2.5**	3.83***

Note: * indicates significance at 1%, **2.5%,5%, and ***10% levels.

Table 6. The ARDL bound testing for cointegration.

Test statistic	Value	Significance	I (0)	I (1)
F-statistic	4.220742	10 per cent	2.294**	3.239***
k	6	5 per cent	2.562**	3.609***
	9	1 per cent	3.663***	4.552***

Note: ** indicates significance at 2.5%,5%, and ***10% levels.

Table 5 displays the bound test results based on the appropriate lag durations chosen by the "SIC." At different levels, every significant result is higher than the F-statistics value of 4.46*. The findings indicate a long-term correlation between real GDP, foreign debt, capital flight, and investment returns. Repudiating the null hypothesis that there isn't a long-term link is therefore required.

The bond's computed F-statistic, 4.220742, is larger than the lower and upper limit critical values at any level of significance, according to Table 6's ARDL bond test findings for cointegration. It is possible to reject the null hypothesis, which states that there is no cointegration, at any level of significance. This finding clearly suggests that the model's variables have a long-term connection.

4.2. The Long and Short-Run Coefficients

The effect of long-run features is evaluated for the *ARDL*, which was presented at the beginning of the original study, in order to accept hypotheses that explore the long- and short-run relationships between variables. The following are the outcomes:

Table 7. The coefficients of the long-run estimation using the ARDL (1, 1, 0, 4, 3, 1, 2).

Variables	Coefficients	Standard error	T-statistic	Probability
Constant	-1.211*	0.068	-0.890	0.133*
CF	1.052***	0.036	-1.652	0.047**
FR	-0.334*	0.044	4.890	0.003***
ED	-0.142*	0.056	9.628	0.000**
DI	-0.201**	0.087	3.626	0.006***
DA	-0.231**	0.099	5.112	0.054**
IC	-0.165**	0.074	3.441	0.006***
ER	1.311***	0.053	4.226	0.007***
DE	1.255***	0.087	4.862	0.008***
C	4.081***	1.373	-0.050	0.465*

Note: *a 1% significance level, ** indicates a 5% significance level; *** indicates a 10% significance level.

With the exception of capital flight, which is significant at the 10% level, Table 7 shows that all variable coefficients are significant at the 5% level. Furthermore, the p-value of 0.0473 at the 10% significance level of the research (using real GDP as a proxy) supports the notion that increased capital flight has a significant and negative influence on economic growth. Moreover, there is a 4% drop in economic growth. This outcome is consistent with Orimolade and Olusola (2018) research, which discovered a negative relationship between capital flight and Palestinian economic growth.

Huge sums of money are being forcibly moved to other economies, deprived the domestic economy of the advantages of higher local investment, the development of infrastructure, and the creation of jobs. These behaviours eventually hurt both sustained growth and economic prosperity. The positive coefficient of 0.142981 and the p-value of 0.0037 at the 5% level show that foreign reserves have a significant and favourable influence on economic development.

This suggests that every 1% increase in foreign reserves will result in an 18% improvement in long-term economic development. This outcome is in line with a 2017 study by Lawal et al. (2017) that discovered a significant relationship between Palestine's foreign reserves and economic expansion. Furthermore, the non-negative coefficient at the 5% level and the p-value of 0.0001 demonstrate that foreign debt had a significant and favourable influence on economic growth. This demonstrates how a 1% causes an increase in foreign debt causes a 10% increase.

Liew et al. (2016) found a correlation between foreign debt and Palestinian economic development, which is consistent with their study findings. Every nation that wants to borrow money from another country does so in order to build the infrastructure that it needs and drive economic growth. A well-run external debt program would strengthen the domestic economy, attract international investment, create jobs, improve social welfare, and expand employment. The correlation between foreign debt and economic development is positive as a result, suggesting that capital projects supported by borrowed funds eventually led to an increase in the size of the economy.

The p-value of 0.0045 at the 5% level and the positive correlation of 0.127599 show that real investment has a significant and positive impact on economic growth. As a result, a 1% increase in domestic investment leads to a 29% increase in economic growth. This result is in line with the capital outflow study (Salandy & Henry, 2017) which showed a connection between growth in the domestic economy and investment. The error correction model ECM, which is based on the ARDL approach, is used to study the short-term dynamic between capital flight and other factors. ECM is a short-term dynamic movement identification method that helps anticipate long-term equilibrium. The rate at which short-term shocks are adjusted to long-term equilibrium is reflected in the coefficient of ECT. For a viable ECM model, a significant ECT coefficient with a value between 0 and -1 is required. Table 8 presents the results of the short-run dynamics using the ARDL method-based ECM model.

Table 8. The coefficients of the short-run estimation using the ARDL (1, 1, 0, 4, 3, 1, 2).

Variables	Coefficients	Standard error	T-statistic	Probability	95% confidence interval	
Constant	-1.290*	0.087	-0.549	0.007*	-0.064	0.074
D (CF)	1.088*	0.064	-1.359	0.003*	-0.088	0.072
D (FR)	-0.659***	0.060	4.226	0.003**	-0.079	0.068
D (ED)	-0.379**	0.077	9.094	0.000*	-0.087	0.019
D (DI)	-0.463**	0.098	3.908	0.000*	-0.022	-0.063
D (DA)	-0.530***	0.0799	5.760	0.000*	-0.189	-0.087
D (IC)	-0.258**	0.087	3.880	0.005*	-0.246	-0.092
D (ER)	1.476*	0.085	4.226	0.000*	-0.275	-0.087
D (DE)	1.446**	0.096	4.862	0.000*	-0.287	-0.083
D (C)	0.077***	1.653	-0.050	0.026*	-0.321	-0.096
CointEq (-1) *	-0.668***	0.231	-5.125	0.000*	-0.056	-0.073

Note: *a significance 1% level, ** indicates a 5% significance level; *** indicates a 10% significance level.

The short-term ECM coefficient, as indicated in Table 8, confirms that the factors affecting national solvency and economic growth continue in the same direction as the long-run relationship. According to the estimation results of the short-run coefficients, every variable that influences capital flight is statistically significant. The nation's economic growth and solvency variables both show results that are consistent with long-term trends. Table 8 indicates that the long-term equilibrium of capital flight value against current shocks in the impacting factors is sufficiently fast, with the coefficient of the error correction term expressed as CointEq (-1) being negative at -0.668421, and statistically significant at the 1% level.

4.3. Corrections Estimated Errors

Co-integrating relationships between the variables, such as ECM-1, support the implementation of error correction. The short-term dynamics are computed, and, in the event of a divergence from the long-term equilibrium, the correction rate is scrutinized in further detail. ECM-1's absolute value ranges from 0 to 1, and the rate of adjustment rises in tandem with its coefficient. The following is a report of the ECM-1 estimated findings.

Table 9. Results of estimated error corrections.

Variables	Coefficients	Standard error	T-statistic	Probability	95% confidence interval	
Constant	-0.245***	0.017	-4.125**	0.005*	-0.057	0.068
Capital flight CF	-0.022**	0.014	-2.324**	0.048*	-0.078	0.060
Foreign reserve FR	-0.083**	0.044	-3.710**	0.010*	-0.091	0.058
External debt ED	0.038**	0.039	2.430	0.026*	-0.059	0.015
Direct investment DI	-0.096**	0.058	-1.407**	0.100**	-0.029	-0.054
Debt to assets DA	-0.316*	0.043	-2.530**	0.038*	-0.162	-0.093
Interest coverage IC	-0.056**	0.053	-3.772**	0.026**	-0.274	-0.098
Equity ratio ER	-0.531*	0.088	-5.310***	0.005*	-0.297	-0.085
Debt to equity DE	-0.732*	0.094	-4.226**	0.002*	-0.239	-0.078
ECM_{-1}	-0.423*	0.265	-3.821**	0.002*	-0.345	-0.081

Note: * indicates a 1% threshold of significance, **indicate a 5% threshold of significance, *** indicate a 10% threshold of significance.

The estimated *ARDL* model (McNown et al., 2018) as shown in the equation obtained a positive ECM-1 result (11), based on the data in Table 9. The estimated coefficient turns out to be unfavourable and statistically significant at the 5% level. This suggests that 56% of the long-run disequilibrium is corrected in the current period by lagged period error shocks.

This demonstrates even more how quickly long-term economic expansion returns to its stable state. Furthermore, because variables have the correct negative sign, which aids in the system's recovery from a disequilibrium, it shows that variables are appropriately characterized. The short-term reaction to the coefficient of foreign reserves and domestic investment is negative, in contrast to the long-term trend. It seems possible, then, to evaluate Palestinian economic development by taking into account all the factors.

4.4. Diagnostic Test Analytics

Heteroscedastic testing, the normality measure, and auto-correlation are some of the diagnostic approaches used to evaluate the dependability of the data. Below is a summary of the results:

Table 10. Results of diagnostic test analytics.

Diagnostic test	Probability value
Testing Breusch-Godfrey for serial correlation	F-statistic = 3.283 P-value = 0.0762**
Breusch-Pagan-Godfrey Heteroskedasticity test	F-statistic = 0.286 P-value = 0.5143**
Standard test	Jarque-Bera = 0.388 P-value = 0.4875**

Note: **signifies lack just at thresholds of significance 5%.

Table 10 displayed the results of the analytical diagnostic tests, including the Breusch-Godfrey test for serial correlation, which had an F-statistic value of 3.283 and a P-value of 0.0762. Furthermore, the standard test and its probability for Jarque-Bera were estimated at 0.388 and also the P-value, which was estimated at 0.4875; finally, the diagnostic test for the Breusch-Pagan-Godfrey Heteroskedasticity test and its probability F-statistic equals 0.286 and P-value equals an estimated 0.5143. Based on the ARDL paradigm, Table 8 presents an estimate of the results of diagnostic techniques (McNown et al., 2018).

Non-significant P-values are produced by heteroskedasticity and the Breusch-Godfrey serial adjustments, suggesting that the model's investment returns are not heteroskedastic or cointegrated. This illustrates how the dependent variable's departure from the fitting link is stable and remains constant as the magnitude of the independent variable increases. The tested model was found to be normally distributed by the Normality and Standard Test since the Jarque-Bera statistic was small. All evaluations indicate that, overall, the residuals do not violate any of the stated assumptions.

4.5. Robustness Checks

We calculated our model using Palestine's economic features to see if our findings were reliable. Table 11 short- and long-term impacts, as well as Tables 12 and 13 (marginal effects), respectively, provide these estimations. There is a good match between the coefficients of capital flight (-0.054 and -0.067), in the short and long terms, external debt (-0.187 and -0.141), and the foreign direct investment (-0.008 and -0.063). This is especially true when looking at the main variables that matter, like capital flight and how it affects economic growth and national solvency.

The narrative for the marginal effect is the same, as can be seen in Tables 12 and 13, for example. In particular, the findings on marginal effects indicates that low levels of capital flight do not counterbalance the negative impacts

of foreign debt and national solvency on economic development. These coefficients were not statistically significant from the first to 25% percentile values, similar to the findings for the complete sample.

However, all of the results from the 50th to the 95th percentiles were adverse and statistically significant. This indicates that the adverse effects of capital flight, as stated above, are worsened by the adverse effects of foreign debt and capital flight on economic development and national solvency in Middle Eastern nations like Palestine.

Table 11. The effect of capital flight on economic growth and national solvency in Palestine.

Variables	Short-run				Long-run			
	Coefficient	Standard error	Wald test	p-value	Coefficient	Standard error	Wald test	p-value
Constant	0.107	0.038	6.055	0.463	-0.412***	0.098	7.132	0.533
Capital flight	-0.054***	0.011	2.884	0.267	-0.067	0.012	3.118	0.035
Change in the external debt. balance	-0.187***	0.013	1.097	0.209	-0.141***	0.014	1.236	0.351
Net foreign direct investment	-0.008	0.052	4.086	0.023	-0.063	0.88	4.228	0.043
Current account balance	-0.213***	0.009	3.641	0.003	-0.132***	0.017	4.674	0.016
Change in the stock of foreign reserves	0.011	0.016	0.790	0.000	0.061***	0.031	0.894	0.000
Amount of capital flight	-0.116***	0.042	5.249	0.041	-0.173***	0.058	6.337	0.033
Rate of change	0.044	0.028	3.065	0.541	0.051	0.029	2.892	0.481
Debt to assets	-0.216***	0.034	0.896	0.011	-0.104***	0.042	4.114	0.021
Interest coverage ratio	0.087	0.018	0.989	0.000	0.048	0.025	0.863	0.000
Equity ratio	-0.214***	0.007	5.275	0.003	-0.163***	0.011	5.338	0.006
Debt to equity ratio	-0.316***	0.005	2.821	0.002	-0.181***	0.015	0.977	0.001
AR2 (p-value)	0.211	0.181	0.142	0.345	0.313	0.104	0.206	0.422
Hansen (p-value)	0.384	0.289	0.167	0.408	0.426	0.211	0.294	0.363

Note: *** represents 1% significance level.

Table 12. The marginal effect of capital flight on economic growth and national solvency as capital flight increases from Palestine.

The effect of short-run of capital flight on economic growth as the capital flight increases					
Percentiles	Capital flight	Coefficient	Standard error	95% confidence interval	
1%	-0.642	0.002	0.031	-0.097	0.065
5%	-0.832	0.002	0.033	-0.095	0.063
10%	-0.567	-0.011	0.029	-0.086	0.062
25%	-0.308	-0.043	0.025	-0.094	0.015
50%	0.042	-0.089***	0.014	-0.016	-0.058
75%	0.226	-0.138***	0.016	-0.165	-0.081
90%	0.328	-0.176***	0.021	-0.225	-0.098
95%	0.403	-0.168***	0.023	-0.258	-0.096

Note: *** represents 1% significance level.

Table 13. The marginal effect of capital flight on economic growth and national solvency as capital flight increases from Palestine.

The effect of long-run of capital flight on economic growth as the capital flight increases					
Percentiles	Capital flight	Coefficient	Standard error	95% confidence interval	
1%	-0.642	0.002	0.028	-0.093	0.065
5%	-0.832	0.002	0.029	-0.093	0.065
10%	-0.562	-0.09	0.026	-0.088	0.063
25%	-0.306	-0.041	0.024	-0.099	0.014
50%	0.040	-0.091***	0.015	-0.148	-0.057
75%	0.223	-0.136***	0.017	-0.167	-0.085
90%	0.387	-0.162***	0.022	-0.198	-0.098
95%	0.402	-0.171***	0.024	-0.216	-0.099

Note: *** represents 1% significance level.

Table 14. Robustness check.

Variable	FMOLS		DOLS	
	Coefficient	p-value	Coefficient	p-value
CF	0.253***	0.000	0.157	0.051
FR	-0.028**	0.538	0.047	0.530
ED	-0.170**	0.000	-0.129	0.011
DI	0.523***	0.000	0.580	0.001
DA	0.159*	0.000	0.144	0.059
IC	-0.169**	0.068	-0.351	0.106
ER	-0.052*	0.503	0.063	0.622
DE	-0.164**	0.461	0.113	0.429
D1	0.129**	0.006	0.181	0.016
D2	-0.058*	0.452	-0.070	0.113
C	2.629***	0.002	2.414	0.000
R^2	0.426		0.632	
Adjusted R^2	0.398		0.599	

Note: *, ** and *** indicate the significance level at 1%,5%, and 10%, respectively. Regress and is CF

Table 14 displays the results for the variables from the Fully Modified Ordinary Least Squares FMOLS and Dynamic Ordinary Least Squares DOLS studies. The results of the study show a strong positive correlation between

FR and CF. In the FMOLS model, the CF variable is not statistically significant; however, in the DOLS model, it becomes significant. In both models, ED has a deleterious effect on CF. Conversely, DA and DI are beneficial in both situations. In both models, IC exhibits a detrimental effect. R^2 and adjusted R^2 results support the DOLS model's greater explanatory power and imply that the variables chosen have a variety of effects on GDP. The findings shed light on the complex effects of the factors under investigation on GDP.

Table 15. VECM granger causality test.

Direction of causality	Wald χ^2 statistics	p-value/Prob.
CF → GDP	5.073	0.000*
GDP → CF	1.480	0.160***
FR → GDP	4.613	0.052**
GDP → FR	6.528	5.E-06
ED → GDP	1.378	0.452***
GDP → ED	6.506	0.000*
DI → GDP	0.736	0.672***
GDP → DI	4.268	0.066**
DA → GDP	0.138	0.741***
GDP → DA	6.365	0.000*
IC → GDP	0.624	0.598***
GDP → IC	6.503	6.E-07
ER → GDP	16.53	6.E-07
GDP → ER	6.702	0.001*
DE → GDP	0.795	0.659***
GDP → DE	1.834	0.313**
FR → CF	6.184	0.003*
CF → FR	1.978	0.189**
ED → CF	0.216	0.804***
CF → ED	0.350	0.715***
DI → CF	0.313	0.680***
CF → DI	3.249	0.062**
CF → DA	0.285	0.739**
DA → CF	2.786	0.082**
CF → IC	5.382	0.006*
IC → CF	1.793	0.321**
CF → ER	6.600	0.004*
ER → CF	0.163	0.753***
CF → DE	0.573	0.649***
DE → CF	5.428	0.000
ED → FR	1.749	0.263**
FR → ED	3.583	0.043**
ED → DI	22.68	1.E-13
DI → ED	3.492	0.062**
ED → DA	5.480	0.003*
DA → ED	5.108	0.000*
ED → IC	6.703	0.000*
IC → ED	0.450	0.717***
DA → DI	0.473	0.693***
DI → DA	1.593	0.152***
DA → IC	0.641	0.794
IC → DA	2.510	0.086**
DA → ER	3.075	0.078**
ER → DA	4.886	0.008*
DA → DE	6.149	0.000*
DE → DA	0.583	0.567***
IC → ER	4.950	0.002*
ER → IC	0.674	0.589***
IC → DE	2.997	0.004*
DE → IC	6.339	0.000*

Note: *, ** and *** indicate the significance level at 1%,5%, and 10%, respectively.

The Granger Causality Test (VECM) is used to determine the direction of causality between variables. Significant evidence points to a unidirectional impact from FR to CF, as seen in Table 15. Comparable patterns are seen for ED and CF, where ED is the cause of CF. On the other hand, CF has a one-way effect on ED. The same unidirectional trend is evident for ER and CF, DA and CF, GDP and CF, and IC and CF. Interestingly, several variables exhibit bidirectional Granger causality, showing reciprocal impacts, such as FR and DI, FR and ED, and IC and DE.

It is determined by diagnostic procedures whether the underlying ARDL-ECM fits properly. Six approaches are used in this study to look for potential instability: variable autocorrelation (the Breusch-Godfrey of Lagrange-Multiplier LM test or Durbin-Watson DW test), heteroscedasticity of time series (the White heteroscedasticity test), the functional form problem (the Ramsey Reset test), and the normality problem (the skewness and kurtosis

measures), (Durbin-Watson test) and (Jarque-Bera test for normality). The empirical results demonstrate that the ARDL-ECM passes every test as indicated in Table 16, confirming the lack of bias. The findings of the Granger causality relationship test, in particular, suggest that Palestine's worsening economic circumstances raise the possibility of capital flight, which stifles economic expansion and lowers growth rates.

Table 16. Stability test results.

Tests	X^2 statistics	Coefficient/Probability
Ramsey reset test	1.03	0.376*** (0.012)
Breusch-Godfrey LM test	1.081	0.286** (0.122)
White heteroscedasticity test	1.26	0.237** (0.131)
Skewness: 0.038	Kurtosis: 2.0046	DW: 1.725
Durbin-Watson test	0.206	2.083
Jarque-Bera test for normality	5.091	623.740* (0.000)

Note: *, ** and *** indicate the significance level at 1%,5%, and 10%, respectively.

It is crucial to emphasize that the model's diagnosis is crucial for the validity of the ARDL estimations. The diagnostics provided in the table show that all estimates, in addition to using correct instruments, show the lack of second-order autocorrelation. This outcome has the potential to impact politics. On the basis of the findings presented above, suggestions can be made.

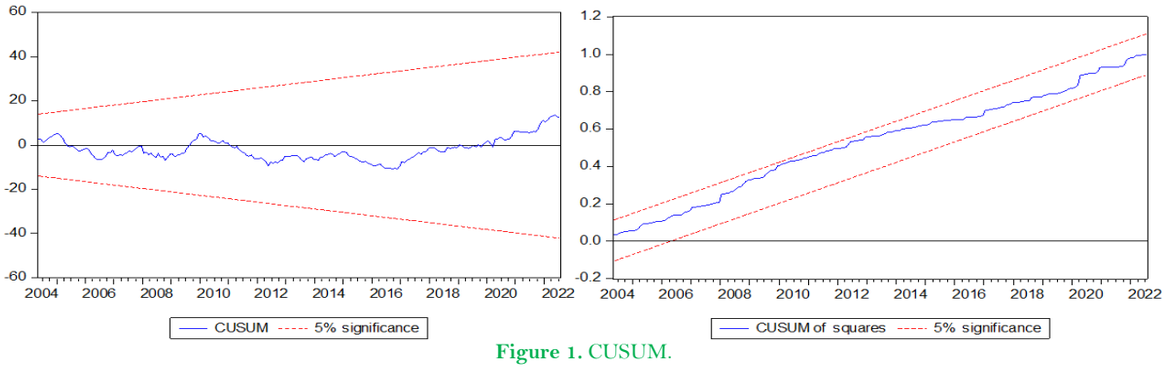

Figure 1. CUSUM.

A useful tool for tracking the predicted coefficients in the model's stability over time is the CUSUM control chart. In this investigation, the CUSUM and CUSUM Square lines frequently fall within the 5% significance limits (Figure 1). This suggests that over the research period, the computed coefficients stay steady and do not show any notable deviations or structural fractures. The robustness and reliability of the model's parameter estimates are confirmed by the presence of both lines within the control limits, which supports the validity of our findings and indicates that the model effectively captures the underlying relationships among the variables over the course of the observation period.

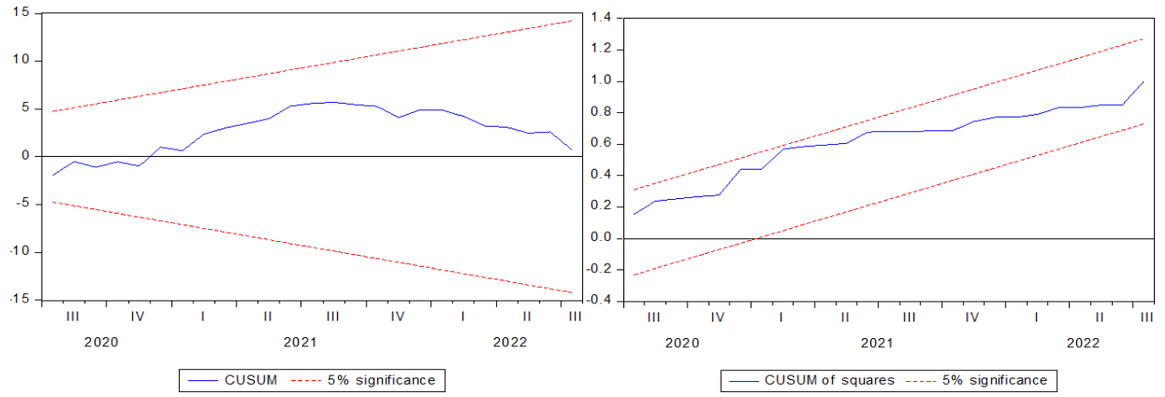

Figure 2. CUSUM square.

The Cumulative Sum Test for Randomness is used to track the predicted coefficients in the model's stability over time. The CUSUM square control charts are useful resources. For tracking the predicted coefficients in the model's stability over time, the Cumulative Sum Test for Randomness CUSUM square control charts are useful resources. Figure 2 shows that the CUSUM square lines in this investigation consistently fall under the 5% significance levels. This shows that during the research period, the calculated coefficients do not show any notable deviations or structural breakdowns. Instead, they stay steady. Both lines' existence within the control ranges demonstrates the robustness and dependability of the model's parameter estimates, supporting the validity of our findings and indicating that the model effectively captures the underlying relationships between the variables over the course of the observation period.

5. Conclusions and Policy Implications

5.1. Conclusions

The study looked at how capital flight affected Palestinian economic development and the country's ability to finance itself from 2004 to 2022. The study finds that capital flight has a negative and considerable influence on economic development and national solvency using the *ARDL* technique and *PMG* estimate process for the dynamic system. This data reveals that the diversion of the country's limited resources to finance foreign investment in certain

safe havens leads to the poor performance of Palestinian economic growth and national solvency. The study also showed a strong inverse association between capital flight and economic development and expansion.

The interplay between capital flight, the increase in the debt ratio, and the increase in foreign loans was found to have a negative and statistically significant impact on growth. The results of estimates of marginal effects indicated that the high rate of capital flight is a route through which the loss of foreign and domestic investments has a detrimental impact on Palestinian economic growth. The current work, in contrast to earlier research, investigates this dynamic relationship using a more contemporary technique called the *ARDL* limits testing methodology. The empirical findings showed that the findings of the short-run analysis are compatible with the long-run conclusion in terms of the influence of each variable. These findings paint a clear picture of the different means through which capital leaves Palestine for other countries. Therefore, in order to achieve desired long-term growth, authorities in Palestine must develop a comprehensive strategy to manage their foreign capital and reduce the growth in capital flight. The following suggestions for policy consideration are based on the summary of research findings provided above:

The Palestinian authorities and decision-makers need to create a dynamic macroeconomic climate that supports business growth, welcomes international investment, and addresses unemployment and excessive pricing. As a result, fewer indigenous resources would be exported from the continent. Once more, the Palestinian leadership and administration must adopt sensible steps to boost domestic revenue and lower the nation's yearly rate of borrowing from abroad and incurring debt. In order to stop corporations, institutions, and companies from evading taxes, they must create a database for every company and digitize the tax collection system. The usage of foreign borrowing facilities needs to be effectively managed and controlled. Whenever possible, establish a separate organization to supervise the projects and programs that receive the debt facilities. A thorough evaluation of the key priorities for which external funding should be allocated should also be made. This would prevent the misallocation of funds to industries that don't yield significant returns on investment. This will improve the nation's capacity to pay off debt and ease its financial issues.

Furthermore, the Palestinian government should work to effectively raise funds from domestic economic activity to support a bigger amount of its budget deficit. By doing so, the country will be less dependent on capital flight, loans, and aid from donor nations and the World Bank, which will lessen the weight of its external debt. Finally, the Palestinian government and accountable agencies must commit to investigating the reasons and channels of capital flight in addition to ensuring effective management to reduce the issue. In order to ensure that those who steal public funds are held to the highest standards of the law, the judicial system and the rule of law must be maintained and strengthened.

Migration and flight of capital limit the possibility for economic growth, impact the employment rates, and impair overall population well-being. The inability of the global economy to come up with a workable solution to stop money being smuggled out of underdeveloped nations will not be a quick fix for the problems caused by capital flight. We determine the culprits' intentions and strategies in order to put an end to this worldwide catastrophe. An increase in illicit money transfers would complicate funding imports and economic growth in the Palestinian economy, which is bereft of foreign cash due to its enormous external debt and widening fiscal imbalance. Among the most influential groups suspected of being responsible for money outflows include foreign investors in the Palestinian financial sector, high-ranking government officials, multinational corporations across many industries, and business executives active in import and export activities. Instead, using annual time series data (2004–2022), this study investigates how capital flight has affected Palestinian economic development over the study period.

The *ARDL* model gathers and assesses information from several sources. There is evidence of both short- and long-term linkages between Palestine's *GDP*, foreign debt, capital outflows, international resources, and local investment (McNown et al., 2018). A closer look at the effects of different factors shows that capital flight, which has a major negative short-term impact on the economy, has the opposite long-term effect from foreign reserves, external debt, and domestic investment.

To stop the rising flow of capital flight, the government must come up with sensible economic reform plans. The creation of an atmosphere that encourages increased domestic production, transparency and accountability in the use of public resources, and robust macroeconomic stability must be the main goals of these economic advancements. Furthermore, a positive coefficient for foreign equity investment necessitates a critical evaluation of Palestine's business environment, as a deficient legal framework and unfriendly investment climate can trigger capital flight.

A sufficient overhaul of policy is required to tackle the underlying reasons behind Palestine's capital flight. This would boost local capacity and drastically lessen the hazard. International communities must also contribute to the reform of the global financial system in order to hold all tax havens and linked countries accountable for and liable to fines for supporting and concealing illicit money flows from impoverished countries.

In conclusion, we note that the existence of global shifts in investment systems as engines of economic expansion, such as capital flight and other economic activity focused on adaptable foreign and local investment pathways and functioning in adaptable investment environments, can present an opportunity to reconsider the necessity of greatly enhancing the conventional Palestinian investment environment. It is reasonable to assume that most jobless university graduates see upgrading their much-needed technical and professional abilities as a lifeline that can lead to job chances. This makes a thorough strategy for profitable investment to lessen capital flight overseas crucial. As a result, the unemployment rate in the nation declines.

By upgrading value chains, raising investments, and developing initiatives that promote the Palestinian economy and lower high unemployment rates, a developed "VET" training system can greatly help reduce the amount of capital that refugees escape from Palestine. To do this, nevertheless, a more thorough approach to ongoing teaching regarding capital development and growth could be more appropriate. Whether it is in the technology sector or through the digital transformation of established businesses, a retrained, educated, and adaptable workforce can support economic growth in Palestine.

The investigation discussed the idea of capital flight, its various meanings, and how it affects the expansion of the economy. The analytical model's findings showed that capital mobility did, in fact, have a detrimental impact on Palestine's process of economic expansion.

5.2. Policy Implications

In the most straightforward scenario, the national economy perceives the immigrant's capital as an opportunity for local investment, despite the lack of research confirming the impact of capital movement on the economy. It is imperative that Palestine strive to mitigate this issue and tackle it to the greatest extent feasible by implementing the following policy implications:

Diversity of national revenue resources: It is possible to argue that industrialization is a natural consequence of both adopting an economic system and broadening the nation's revenue sources. It increases economic stability and lessens the impact of fluctuations in the world economy. It is worth noting that several economists have said that inadequate investment climates are not the main reason for capital flight. In this regard, Pasteur indicates that "foreign corporations spend their capital in the form of loans to other nations if the financial market in a state is not favourable to the outflow of actual cash." Rather, Pasteur attributes capital flight to the way local authorities handle domestic investors unevenly and their increasing vulnerability to foreign loans when they don't activate it.

Combating bureaucracy and corruption: Just as the removal of corruption was a major factor in the capital flight, it is now critical to eradicate corruption as a means of putting an end to this phenomenon. President Mahmoud Abbas of Palestine spearheaded the need to create an anti-corruption body in order to combat the underlying causes of administrative corruption inside the government machinery and improve corporate operations. Encouraging these initiatives is crucial to creating a transparent national economy that all investors can rely on.

Simultaneously, the government must focus on removing different administrative obstacles and supply the required funding for different initiatives, particularly those involving small and medium-sized businesses. The following outcomes should be expected from the teaching process: Numerous economists have attempted to devise metrics to determine the degree to which education influences the economic process. The scientist known as "Krueger" found that not only does education contribute to economic development, but that it also explains around 75% of income ratios, along with the age distribution and population's sectoral distribution. The study, examining 20 countries, highlighted that schooling alone could account for 25% of the disparities. As one of the most crucial elements in igniting Palestine's labour market, the Palestinian government must therefore enhance the educational process' outputs to correspond with the demands of employment.

The following practical implications were developed by the researchers in light of the study's findings: Attempt to ascertain if the Palestinian political and institutional structure is parliamentary, presidential, or a hybrid of the two. In terms of finances, internal affairs, and foreign policy, the presidency and the Palestinian government have distinct authorities. establishing an alliance based on genuine collaboration between academic institutions, centres for scientific research, and authoritarian organizations in a way that advances institutional integrity and change. Turning on systems to stop fraud, carelessness in the administration, and misappropriation of public monies.

Constructing a conceptual and theoretical framework for a comprehensive institutional reform that takes into account the uniqueness and exceptionalism of the Palestinian people in the face of the existence of authoritarian institutions devoid of true sovereignty. Making an effort to create a thorough and comprehensive constitution that takes into account the Palestinian experience in writing the Basic Law and the Declaration of Independence. Creating a political culture that is aware of the need to support the reform process and combat corruption, while also encouraging individualism in a constructive way, is crucial for the typical Palestinian citizen. Strengthening the partisan and organizational structures inside Palestinian forces and parties, as partisan culture narrow or wide and logical reflects on society's political culture as well as the process of modernization, regeneration, and reform. Fostering and facilitating international investment by establishing a reliable and secure investment environment. Lowering foreign borrowing by utilizing all available local and national resources.

The study offers some observations on the institutional changes that Palestine has to adopt. These observations can assist regulators and policymakers in implementing the following changes: Adjust macroeconomic policies, reduce the size and scope of government, destroy protectionism and statism's institutions, build and renovate institutions, increase private sector competitiveness, and change the way public services like education and health care are produced, paid for, and provided. Establish new global economic implantation and capitalist economic structures. Improve socioeconomic circumstances, boost international competitiveness, lower inflation, restore growth, and preserve macroeconomic stability are all important goals for the Palestinian Authority.

Palestinian authority should make some institutional reforms as follows: Palestine has to make sure that the macroeconomic climate is dynamic and conducive to business growth and investment. As a result, the rate at which local resources depart would decrease. Furthermore, Palestine has to implement efficient policies to generate enough income from the domestic market, lower its rate of external borrowing, and achieve self-sufficiency. In order to stop businesses, organizations, and corporations from evading taxes, they must create a database of all enterprises and digitize the tax collection system. Effective administration and monitoring over the utilization of foreign credit facilities are also necessary. The projects and programmes for which local and regional banks have provided foreign or local debt facilities ought to be overseen by an independent agency, if at all feasible. Additionally, a thorough evaluation of the top priorities for which outside funding should be allocated has to be done. This would prevent the improper allocation of funds to unproductive industries with low rates of return on investment. This will lessen Palestine's financial issue and improve the country's ability to service debt. Additionally, the Palestinian government needs to work towards effectively mobilizing domestic economic activity-based revenue to pay a greater percentage of its budget deficit. This will lessen the strain of foreign debt and the exodus of capital from Palestine.

The idea of rescheduling external debt as a solution has further policy considerations. Rearranging just serves to postpone and worsen the situation in Palestine. Debt and borrow relief should be given careful consideration because of the impact that external debt and borrowing from developed nations have on our nation's macroeconomic performance. Reducing uncertainty is one of the main benefits for both domestic and foreign investors. This will free up a large number of policymakers from uncertain and lengthy debt discussions. The developed world will benefit from a spillover effect in commerce if the afflicted nations in the region experience growth as a result of the additional resources. One of the most important Israeli political elements that has the greatest impact on the economic situation in Palestine and the labour market is the hot and cold war that Israel is waging on the West Bank and Gaza Strip at the present time, which is casting a shadow on all aspects of life, including the labour market, the decline of money and business, and the lack of resources and their seizure. The annexation of Palestinian lands to Israeli lands and

their control over them by force militarily, and thus the decline in employment opportunities, the seizure of Palestinian clearance funds and their continuous seizure, the decline in donor and financier support, and the conditions of uncertainty imposed by Israel as an economic policy on the country, whose area is increasing in light of a conflict with a colonialist enemy whose policy is plundering land and resources and establishing settlements on them, and he takes control of all matters and his livelihood and tries to evade the implementation of the agreements, most notably the Paris Economic Agreement.

The current conflict between Hamas and Israel, which is called by some terrorism on the part of Hamas and is in fact a conflict over land, sanctities, and survival, is a conflict that has left bad political effects and constituted very great damage to Palestinian economic growth, a major decline in it, and a significant deterioration and decline in economic activities. On the phenomenon of capital flight and foreign investments in Palestine, therefore, one of the most important solutions that can be presented is to stop this conflict completely and live in peace in order to achieve economic growth and reduce the phenomenon of capital flight. The Palestinian market will flourish and recover in light of lasting peace, in support of the results and recommendations of previous studies such as (Abadie & Gardeazabal, 2003; Horiuchi & Mayerson, 2015).

As a result, it is anticipated that the government will put forth great effort to raise the GDP by 13.0% in 2024, which would raise the value of the country's per capita share by 10.4% and the value of total consumption (private and public) by 6.9%. Compared to 2022, the overall investment value will rise by 62.1%. For the sake of legitimacy and public confidence, development aid should first be highly supervised. Only then, can the government and financial agencies designate specialized oversight committees to ensure appropriate use of aid. Funding organizations are also required to oversee and record development initiatives, including them in the yearly plans of the government. The administration should allocate development funding to the appropriate and essential initiatives, with an emphasis on industries, investments, hiring Palestinian labourer, and generating new employment possibilities.

To reap the benefits of the financing and witness tangible outcomes on the ground, funding organizations must transmit this help to the intended and recipient parties under strict monitoring and control. Lastly, Palestine, being a developing market, has to commit to investigating the routes and causes of capital flight in addition to making sure that foreign debt and borrowing are managed effectively. In order to accomplish this, it will be necessary to fortify the legal system and the rule of law, guarantee that those who embezzle state funds face the harshest penalties possible, restrict Palestinian investments overseas, and enact laws and legislation that bind capital owners and investors following the leakage of Palestinian investment funds abroad. The monetary and fiscal authorities should create an efficient policy framework in light of these results.

It must be realized that all aid that reaches Palestine to the Palestinian Authority is used within the Palestinian territories and flows into developing and encouraging the local economy, projects and investments, supporting national industries, and trying to provide job opportunities for the unemployed. It is also important for him to realize that terrorist activities do not take any money from aid and have nothing to do with them, that Hamas has its own sources of funding, that this matter is not considered terrorist activities at all, and that the issue is an issue of conflict on the ground and in the homeland. We do not consider this terrorism, but rather it is a defence of self, homeland, and property. The financial aid that reaches Palestine and the West Bank in particular is harnessed and used in all economic sectors, and Hamas has nothing to do with it. Drawing from the findings of our study, we suggest the following conclusions: The process of capital flight continues as long as the Israeli occupation exists and the conflict between Hamas and Israel continues, and this matter results in the flight of major investors and those with major interests in the country fleeing with their money and property to preserve it. In order to support and revive the Palestinian national economy, attract major investors, obtain large funds and foreign financial aid to support and advance the economic sector, and repair the effects of the recent war on Gaza within the country, the Palestinian government must reach a solution with Israel and Hamas, end the conflict, and establish lasting peace and stability.

6. Recommendations, Limitations and Future Research Directions

It is believed that the exodus of capital poses a serious threat to the Palestinian economy, which depends heavily on this valuable resource and ought to, in principle, be the driving force behind the country's economic expansion. Palestine's present geopolitical circumstances have prevented it from recording the appropriate rates of economic growth in recent years. The economies of the islands that make up its archipelago, such as Gaza's sector, Area C of the West Bank, and East Jerusalem, are all subject to constraints. Due to its reliance on foreign funding and generally unproductive private sector, the Palestinian economy has not been able to provide enough employment to accommodate the yearly influx of graduates into the labour force. The harsh and oppressive policies of the Israeli occupation have led to the capital flight of foreign investors, creating a risky investment environment that prevents an increasing number of educated Palestinians from actively participating in the Palestinian economy.

As a result, the study's conclusions led to some of the suggestions listed below. First, the Palestinian government should work to create a business-friendly environment that welcomes foreign direct investment and supports the growth of existing businesses in order to stop capital flight. Second, it is the duty of the Palestinian government to see to it that the planned projects and programmes are funded by foreign loans. Third, since these infrastructure upgrades would lower the cost of producing things there, the Palestinian administration should put an end to capital flight. Fourth, in order to attract international investment, the Palestinian administration has to establish favourable conditions. Fifth, entice investors and company owners to make investments in the area. Sixth, use all aid funds wisely in order to stop capital flight, stimulate the economy, and provide employment opportunities for the unemployed.

The current study aims to determine the impact of capital flight on Palestine's economic growth and solvency as a nation. The study's rationale and the availability of data for the study elements used in the inquiry led to the choice of the 2004–2022-time frame. It was determined that this influence will hinder Palestinian economic development. Reviewing earlier research on the topic of the present study is essential, as is keeping up with the most recent results, conclusions, and suggestions from past investigations. The present study employed and examined data from credible official government sources, yielding satisfying and empowering outcomes. As a result, the evaluation reveals certain crucial elements, such as its reliance on earlier research and a logical approach appropriate for the subject and

information investigation strategy of the study. Since the author has carefully reviewed the material, the results and recommendations are sufficient.

The fact that this investigation relied more on a quantitative than a subjective approach to the data presents another crucial obstacle. The outcomes, recommendations, and conclusions are gathered and written in the most notable ones, which may be helpful for further research. The factual approach produced such results, leaving room for further investigation. Furthermore, the research's logical approach and analysis of its main argument are crucial and helpful for further research and thought processes. One of the most important aspects of this issue is that it revealed the real effects of the capital flight from Palestine, the effect of local financial experts leaving the country, and the quantity of settlements transferred abroad on the nation's ability to manage financial advancement.

The study employed experimental data from Palestine's present economic situation to define the impact of each component on the country's economic growth strategy. In this sense, the findings, conclusions, and suggestions of the current study will be advantageous to future research and contemplation, and they will assist the authors and analysts in carrying out more extensive analyses pertaining to the topic and problem under discussion. A considerable amount of high-quality data is included in the research's results. Many organizations and even national divisions provided contradictory information, which led to this incarceration. We lack the information we need since the sources that should have provided it have not produced the data, and after extensive research, the data could not be used as it should have been.

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