AMERICAN UNIVERSITY OF BEIRUT

LEBANON'S ECONOMIC AND FINANCIAL CRISES: IMPACT OF CURRENT ACCOUNT DEFICIT ON GROSS FIXED CAPITAL FORMATION

by

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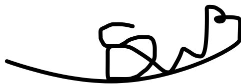

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ABSTRACT

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After the financial globalization, concerns rose over the dynamics of current account balance and its relationship with capital investments in developed and developing countries. Understanding the factors behind persistent current account deficits and their relationship with investments in emerging market countries would help policymakers in the economic decision-making process.

This thesis aims to assess the impact of the current account deficit on gross fixed capital formation in Lebanon, a developing country that has recently experienced an economic and financial crisis. Using annual data from 1990 to 2021, the study employs Vector Autoregression (VAR) econometric technique to analyze the relationship between these variables over time. We use the Granger Causality test to investigate the causal relationship between them. The results suggest that there is no proof of any impact of the current account deficit on gross fixed capital formation in Lebanon. However, the opposite is true; such that gross fixed capital formation Granger causes the current account deficit. The findings of this study have important implications for policymakers to stimulate economic growth and development in the country.

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ABBREVIATIONS

CAD	Current Account Deficit
FDI	Foreign Direct Investments
GDP	Gross Domestic Product
GFCF	Gross Fixed Capital Formation
VAR	Vector Autoregression

CHAPTER I

INTRODUCTION

Lebanon is facing economic, financial, and socio-political crises, that is likely to rank among top 10, possibly top 3 crises in the world.[1] Excessive fiscal and external imbalances, financed through debt for decades under a fixed exchange rate system, destabilized the sovereign, banks, and central bank balance sheets and resulted in a sudden stop of capital inflows, which sparked a debt, banking, and currency crisis. Nevertheless, Lebanon has been running a deficit in its current account balance for years. Current account deficit (CAD) has long been a topic of interest in the field of international economics. It supposedly marks imbalances in an economy and occurs when expenditure is more than its income.

In this thesis, we are interested in examining the impact of CAD on capital investments in Lebanon. We use gross fixed capital formation (GFCF) as an indicator of capital investments. It is an important indicator of a country's economic growth and development. I will analyze data on CAD and GFCF over a period from 1990 – 2021 in Lebanon as well as Greece and Cyprus, and employ the Vector Autoregression (VAR) model as the econometric technique to explore the relationship between these two variables over time in several countries. We use the Granger causality test to study the causal relationship between CAD and GFCF.

The results of this study will provide valuable insights into the economic consequences of CAD, along with the dynamics of capital investments and the factors that shape a country's economy.

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[1] Think Tank European Parliament. April 2022

The thesis is structured into six chapters. The first chapter is an introduction, the second chapter is a literature review that includes a section of past crises in other countries and a section that shows the determinants and dynamics between the current account balance and capital investments. The third chapter is an overview of the Lebanese economy from the civil war up till the financial and economic crises after 2019. The fourth chapter includes the data and methodology while the fifth chapter demonstrates the findings and results. Finally, the sixth chapter concludes the thesis and suggests structural reforms for the recovery of Lebanon.

CHAPTER II

LITERATURE REVIEW

A. Past Economic and Financial Crises

1. *Greece*

Greece faced almost the same circumstances as Lebanon after the Global Crisis in 2008 which hugely impacted the country's economic conditions. The situation in Greece was triggered by the global crisis and not a direct result of it, as the deterioration in the economy was not only due to weak and ineffective financial policies but also due to the instability and unreliability of political institutions. In other words, the crisis was a result of compounded factors over the past 25 – 30 years related to the insufficient governing body, unsustainable retirement, unfair taxation system, low competitive power, high debt level, and high budget deficit[2].

Greece experienced the shocks of the global crisis gradually: first, it was a *sovereign debt crisis* where investors realized that Greek's debt is no longer sustainable, and they are not willing to finance the government deficit. Second, there was a *banking crisis* as banks became insolvent and could not finance themselves. Finally, Greece witnessed a *sudden stop* when foreign investors were reluctant to lend Greece, which widened the country's current account deficit reaching 15.9% of output in 2007.[3] To shed light on the *sudden stop* phenomenon, it

[2] Ozturk, Serdar, and Sozdemir, Ali. "*Effects of global financial crisis on Greece economy*." Procedia Economics and Finance 23 (2015), p. 569

[3] Gourinchas, Philippon, and Vayanos. "*The Analytics of the Greek Crisis*." (2015), p. 1, 3

occurs when there is an increase in the cost of borrowing of firms and consumers, which in turn leads to a decline in investments, consumption, and output.[4] Also, it causes depreciation in the exchange rate, decline in reserves and fall in equity prices.[5] With respect to the current account deficit before the crisis, it deteriorated due to a decline in net current transfers (following a drop in EU subsidies) and net primary income, as Greece became a net immigration country decreasing workers' remittances.[6] As for debt levels in the pre-crisis period in Greece, they were considered very high - 103.1% of output in 2007 - as they were more than twice as large as the average of the emerging-market economies, which accounts for the severity of the crisis.[7] A sizeable part of Greece's foreign debt is public debt because tax revenues were lower than expectations and imports were more than exports.[8] Trade balance declined to reach -10.6% of GDP during 2001-2008[9]. Moving to the macroeconomic developments in Greece during the crisis (2009-2014), GDP per capita declined sharply by 25.8% between 2008 and 2014 accompanied by a huge fall in investments, where in 2014 it was less than half its value in 2008[10]. Also, the debt-to-GDP ratio, rose from 126.8% in 2009 to 177.1% in 2014 and the unemployment rate rose from 7.8% in 2008 to 26.6% in 2014.[11] Furthermore, budget deficit was 12.9% of Greece's GDP in 2009 which is four times more

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[4] Gourinchas, Philippon, and Vayanos. "*The Analytics of the Greek Crisis*." (2015), p. 3, 4

[5] Eichengreen, Gupta. "*Managing Sudden Stops.*" World Bank Group (2016), p. 2

[6] Gourinchas, Philippon, and Vayanos. "*The Analytics of the Greek Crisis*". (2015), p. 10

[7] Ibid, p. 3

[8] Ozturk, Serdar, and Sozdemir, Ali. "*Effects of global financial crisis on Greece economy*." Procedia Economics and Finance 23 (2015), p. 571, 572

[9] Gourinchas, Philippon, and Vayanos. "*The Analytics of the Greek Crisis*." (2015), p. 10

[10] Ibid, p. 17

[11] Ibid, p. 1, 17

than the EU's 3% limit. In the same year, credit agencies: Fitch, Moody's, and Standard and Poor's downgraded the country's sovereign debt to junk status, which raised borrowing costs and scared off investors.[12]

In 2010, International Monetary Fund (IMF) and European Union (EU) provided an adjustment program financed by European countries to help Greece avoid default on its creditors and reduce government deficit smoothly. The loan amount agreed upon was 110 billion euros; 80 billion euros from Eurozone countries of which Germany provided the largest amount (approximately 22 billion euros of the 80 billion euros portion),[13] and the remaining 30 billion euros were from IMF. In exchange, Greece had to adopt austerity measures and structural reforms including 30 billion euros cut in spending. Measures required increasing taxes (VAT); indirect taxes on alcohol, cigarettes, and oil, as well as real estate and luxury goods; adjusting regulations on pension systems and decreasing total payments for public sector employees[14], which in turn reduces the cost of goods and boosts exports. Also, Greece had to privatize many state-owned businesses such as electricity transmission.[15] the ECB also provided assistance to restructure the banking sector as these loans were crucial for addressing the liquidity issue of Greek banks. Some banks were resolved with their deposits and loans being transferred to the four largest banks that were recapitalized. This process was completed in 2013. However, second and third recapitalization processes were done in 2014 and 2015 respectively, with a total amount of

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[12] Amadeo. "*Greek Debt Crisis Explained*." The Balance Economy. (2020)

[13] "*Greece's Debt Crisis Timeline.*" Council on Foreign Relations.

[14] Ozturk, Serdar, and Sozdemir, Ali. "*Effects of global financial crisis on Greece economy*". Procedia Economics and Finance 23 (2015), p. 574

[15] Amadeo. "*Greek Debt Crisis Explained*." The Balance Economy. (2020)

13.7 billion euros raised from private investors.[16] Later in 2012, Greece's second bailout, worth 130 billion euros was approved by euro area finance ministers over a 2-year period, in return for reducing its debt-to-GDP ratio from approximately 170% to 124% by 2020.[17]

2. ***Turkey***

Turkey's debt and currency crisis scenarios are similar to that of emerging markets, where growth is fueled by borrowed funds from international capital markets with low interest rates. The country's economy had a robust performance since 2010, averaging an annual growth of 6.85%.[18] Growth rates were soaring beating market expectations, which revealed the underlying imbalances that drove the country to its fallout. Increasing private sector debt, widening current account deficits, high employment, and high inflation became worse due to macro-financial instability since August 2018. The announcement of early presidential and parliamentary elections in April 2018 increased policy uncertainties and raised doubts over the Medium-Term Program 2018-2022 that was published in October 2017. The Programmer's macroeconomic framework aimed to reduce the government debt from 2.4% of GDP in 2017 to 1.9% in 2018. Turkey's large account deficit shows that it is highly dependent on foreign investment inflows to fund growth, putting the economy fragile to disruptive changes in investor confidence.

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[16] Gourinchas, Philippon, and Vayanos. "*The Analytics of the Greek Crisis*." (2015), p. 16, 17

[17] Ozturk, Serdar, and Sozdemir, Ali. "*Effects of global financial crisis on Greece economy*". Procedia Economics and Finance 23 (2015), p. 574

[18] Uctum and Xi. *"Turkish currency and debt Crisis."* The Economic Studies Group, City University of New York (2018)

In addition, other threatening conditions include rising unemployment and inflation (reaching 16% in July, almost triple the central bank's target of 5%[19]) which weigh on households' purchasing power, given the Turkish lira's sharp depreciation against the dollar. As a result, borrowing costs of firms carrying high foreign currency debt increased, external debt climbed to $466.67 bn (half of GDP)[20], demand was overly driven by high domestic consumption, and domestic savings declined which raised concerns over the sustainability of economic growth.[21] The main drivers of external debt in Turkey are the current account balance, the exchange rate, the interest rate, and the share of foreign direct investment (FDI).

On the other hand, geo-political conditions also weighed on the economic outlook. Syrian civil war has put neighboring countries in a vulnerable position with high exposure to external powers interfering in the region. Nevertheless, tension has risen between Turkey and the US after pastor Andrew Brunson, an American citizen who lived in Turkey for 23 years and was for the Izmir Diriliş (Resurrection) Church, was convicted of the charge of espionage and aiding terrorism[22]. Also, the situation became more critical after ties were repaired with Russia at the expense of alliances with the US. In 2018, President Recep Tayyip Erdoğan exerted more control over the Central Bank after he won the elections which raised concerns over the President's unconventional ideas about interest rate policy.[23] Kutlay, a Senior lecturer in the Department of International Politics at City, University of London, expressed

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[19] Lee. "*What went wrong for Turkey? Its economy is 'in the midst of a perfect storm*," CNBC (2018)

[20] Uctum and Xi. *"Turkish currency and debt Crisis."* The Economic Studies Group, City University of New York (2018)

[21] *"Economic Survey of Turkey."* OECD. (2018), p. 15, 16

[22] Çakmaklı, Demiralp, Yeşiltaş, Yıldırım. *"An Evaluation of the Turkish Economy during COVID-19"*. Centre For Applied Turkey Studies, January (2021)

[23] Koc, Ersoy. *"How Turkey Created a Debt Crisis."* Bloomberg. December (2018)

that the president was against the mainstream paradigm because he believed that high interest rates cause high inflation.[24] As a result, the Turkish Lira depreciated by 20%. So, the Central Bank responded with a rate hike of 625 basis points, and governor Murat Çetinkaya was replaced by a new governor Murat Uysal. Uysal reduced rates by 15.75% because Cetinkaya refused to adopt an easing policy as per President Erdoğan's request.[25]

Turkey, similar to the rest of the world, was deeply affected by COVID-19. The virus was first announced as a *pandemic* by World Health Organization in March 2020 when the Turkish economy had already been suffering from high inflation and a wide current account deficit. The pandemic hit Turkey through regular supply and demand channels. Industries with trade linkages and external borrowing were highly impacted due to disruptions in supply chains and depreciation in the Turkish Lira.[26] However, policy response to the pandemic led to a sharp rebound in the Turkish economy in the second half of 2020. Turkey was one of the few G20 countries with positive growth despite rising inflation, weak Lira, and falling reserves.[27]

In 2021, recovery accelerated in the Turkish economy, but macro-financial imbalances were on the rise. Turkey experienced economic growth of 11.7% year-on-year in the first three quarters of 2021 due to external and domestic demand and lower unemployment rates. Also, the current account deficit narrowed, supported by a boost in

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[24] Young. *"Why is Turkey's President Cutting Interest Rates, Spurring Inflation and Lowering the Value of the Lira?"* Carnegie Middle East Center, December 2021

[25] Çakmaklı, Demiralp, Yeşiltaş, Yıldırım. *"An Evaluation of the Turkish Economy during COVID-19"*. Centre For Applied Turkey Studies, January (2021)

[26] Ibid.

[27] Press Release. *"Economic Rebound in Turkey this Year Could Be Impacted by Domestic Macroeconomic Volatility and Evolving Global Uncertainties."* World Bank, April 2021

exports. Yet, the Turkish Lira reached record lows in the fourth quarter of 2021 and CPI inflation increased to its fastest rate (48.7%, year-on-year) in January 2022.[28] The Lira shed 44% of its value against the dollar over the year, along with persistently high inflation due to rate cuts to 14% carried out under pressure from Erdogan[29].

At a time of ongoing economic instability and volatility, the Russia-Ukraine war exerted more pressure on the economic outlook in Turkey. The conflict led to sharp hikes in the prices of energy and commodities where Turkey is reliant on exports and imports. Turkey's expenditure averages around $45 billion on crude/refined oil, coal, and natural gas imports. In 2021, Turkey's total energy bill was almost equivalent to $55 billion when Brent crude averaged $72 per barrel. Unfortunately, as of March 2022, Brent was trading at $120 per barrel. The tourism sector was also affected in Turkey as the country expected to host 10 million Russian tourists given the easing of COVID-19 restrictions, who account for $5 billion of income. However, Turkey maintained a neutral stance and did not join any of the sanctions that were imposed by the European Union, Britain, Canada, and the United States on Russia. As a matter of fact, since the vulnerability of the Turkish economy was very obvious, the West did not even try to drive Turkey into holding the burden of imposing any financial sanctions.[30] The economy is on the verge; so, if the government does not stop the current easing policies, the result will be a sudden stop, similar to what happened in Greece.

[28] "Turkey Economic Monitor: Sailing Against the Tide." World Bank, February (2022)

[29] Toksabay and Gumrukcu. *"Turkey's lira logs worst year in two decades under Erdogan."* Reuters, December (2021)

[30] Kubilay. *"The Ukraine war has upended Turkey's Plans to Stabilize the Economy."* Middle East Institute, March (2022)

Thus, economic stability is forecasted to be extremely difficult and political consequences are inevitable until the scheduled elections in June 2023.[31]

3. ***Cyprus***

Cyprus experienced a crisis that was mainly a banking crisis in March 2013, almost three years after the crisis outbreak in Greece. Imbalances in Cyprus were similar to that in Greece, however, not to the same extent. Unlike the case of Greece, the economy in Cyprus was not significantly impacted by the subprime mortgage 2008 fiscal crisis in the US, as none of the Cypriot banks invested in mortgage-backed securities. When EU members had almost negative growth, Cyprus maintained a prolonged period of stability with an average growth rate of 3.9%, an average fiscal balance of -2.7%, and an average unemployment rate of 4.3%[32]. Hence, we realize that the crisis was driven by fiscal mismanagement that led to a failing governing body and a lack of accountability to monitor the misconduct of managers in the banking sector. Fiscal and banking vulnerabilities started in 2009. Yet, the crisis peaked in 2013 when the first bank bail-in happened, resulting in a crippled economy and severely demolished banking sector.[33] Credit ratings of the Republic of Cyprus by Fitch, Moody's, and Standard & Poor's were downgraded to "an average lender", yet, were considered quite satisfactory until the middle of 2011.[34] This was due to increasing budget deficits, exposure of the banking sector to Greek Government Bonds and private loans, and declining

[31] Kubilay. "As Turkey's economic woes worsen, a new currency crisis is approaching." Middle East Institute, June (2022)

[32] Hardouvelis, Gkionis. "A Decade Long Economic Crisis: Cyprus vs. Greece." (2016)

[33] Brown, Demetriou, Theodossiou. "Banking Crisis in Cyprus: Causes, Consequences, and Recent Developments." Multinational Finance Journal, (2018)

[34] Ibid, p. 70

competitiveness of the Cypriot economy. Immediately after the crisis in Greece in 2010, Cyprus' sovereign debt spreads started rising until it lost access to the market in mid-2011. According to Standard and Poor's, Cyprus's long-term local currency government debt was downgraded to CCC+ in December 2012, followed by Moody's reduction to Caa3 in January 2013.[35]

In April 2013, to avoid severe consequences, the Government of Cyprus was left with no choice but to accept the terms of the *Memorandum of Understanding (MoU)* introduced by the *Troika* (European Commission, European Central Bank, and International Monetary Fund). It was over a period of three years from April 2013 to March 2016. Looking at the country's macro development, GDP started deteriorating in 2009, reaching a 6.9% decline in 2012, after it was increasing at an annual rate ranging from 4% and 9.4% between 2000 and 2008. Also, in 2009, the budget surplus declined into a deficit of 5.4% of GDP while public debt relative to GDP increased to 53.8%. The debt burden kept weighing on Cyprus reaching 107.5% of GDP in 2014.[36] In addition, annual average unemployment soared to 11.8% in 2012 compared to 3.7% in 2008. Another risk to discuss was the sudden decline in investments. From 2007 to 2012, the investment-to-GDP ratio dropped by almost 10%, which may have negative projections on the supply side of the economy in the future.[37]

After undertaking the rescue program offered by Troika, macroeconomic outcomes were better than expected beating initial forecasts. The key features of the program were the bail-

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[35] Asonuma, Pappaioannou, Tsuda. "Banking Crisis, Sovereign Debt Restructurings, and Financial Stability Policies in Cyprus During 2012–13". Multinational Finance Journal, (2021)

[36] Brown, Demetriou, Theodossiou. "Banking Crisis in Cyprus: Causes, Consequences, and Recent Developments." Multinational Finance Journal (2018), p. 72

[37]Hardouvelis, Gkionis. "A Decade Long Economic Crisis: Cyprus vs. Greece." (2016), p. 14

in of depositors and the restructuring of the banking sector. Also, as a conditional reform, the government of Cyprus committed to restricting fiscal policy and adopting other initiatives to increase efficiency and credibility in the economy. The country secured the fastest return to international markets. In 2015, GDP growth was the first positive growth after a three-year recession, where it expanded by +1.6%, compared to -2.5% in 2014, -5.9% in 2013, and -2.4% in 2012.[38]

4. ***Egypt***

Egypt is familiar with economic crises. Egypt has been experiencing a protracted economic crisis since the monarchy's collapse and the republic's inception in the early 1950s. In 1954, Gamal Abdel Nasser was elected president of the country. He moved the nation away from capitalism and closer to his strongly held ideology of socialism/communism. Two years later, Nasser announced the adoption of a constitution that transformed Egypt into a socialist Arab state with a single-party system and Islam recognized as the state religion. Later, Anwar Al-Sadat's plan to replace Nasser's failing socialist system with a liberal open market economy was negatively impacted by Egypt's drastic political and societal shifts when he assumed power in 1970 following Nasser's death. Therefore, we realize that Egypt continued to function under a defective system, which significantly limited its ability to grow and expand to adjust to the ongoing changes in the global economy. Furthermore, in 1981, when Husni Mubarak became president following Sadat's assassination, he made no attempt to restructure the political regime or the economy as long as it was in his favor. Using this

[38] Ibid, p. 16, 21

hybrid economic structure to his advantage, Mubarak managed to captivate the public into tolerating his reign for thirty years. [39] Corruption, embezzlement, and misconduct were deeply rooted in the public and private sectors of the country. This resulted in a revolution led by the military to overthrow Mubarak in 2011, followed by a second wave of protests against Muslim Brotherhood rule in 2013. Consequently, Egypt was considered a state of high instability and unrest that lasted till 2015.

Following these events, the economic situation in Egypt gradually deteriorated, which worsened the country's already polarized political parties. Both military and civilian authorities have failed to revive people’s trust. Investment was impeded by the ongoing insecurity brought on by the decline in law and order. Concerns rose over possible economic shocks, like a sharp increase in the cost of living or a drastic devaluation of the currency, which could trigger street violence.

Prior to the political turmoil, Egypt's economy was robust in many aspects. Between 2000 and 2010, the economy grew at an average rate of 5% each year[40]. Beginning in 2004, the government implemented extensive structural reforms, such as lower tariffs, the privatization of state-owned businesses, and fewer regulations for the private sector, among other policy initiatives, to enhance the business climate and boost Egypt's economy's competitiveness.[41] Also, Egypt’s FDIs increased from 1.2% of GDP in 2000 to 9.3% of GDP in 2006. Later in

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[39] Ziada. “Chronic Crisis of the Egyptian Economy.” MAJALLA, April (2022)

[40] IMF, *World Economic Outlook*, April 2013 or the World Bank, *World Development Indicators*, (2013)

[41] World Bank, “Egypt: Positive Results from Knowledge Sharing and Modest Lending,” Independent Evaluation Group Assistance Evaluation, (2009).

the period of 2008-2009, Egypt's economy was fortunately unaffected by the global financial crisis because it was less exposed to financial products at its core.

Although Egypt's economy experienced significant development and capital inflows during the 2000s, there were underlying vulnerabilities and imbalances. The economic reforms that were introduced by international investors and relevant organizations did not immediately help the majority of Egyptians. Growth did not reduce poverty nor the high unemployment, which during the 2000s averaged 9.9%. Furthermore, between 2002 and 2010, the government's budget deficits averaged 8.2% of GDP, which was also relatively high. Public debt reached 73% of GDP in 2010 (above the 60% threshold that is believed to be beneficial for growth) due to increasing budget deficits. After 2011, the country suffered from a sharp decline in tourism revenues and annual GDP growth dropped to 1.8% in 2011 and still remains below the pre-revolution level, averaging 2.1% in 2013.[42] Also, the nation struggled to translate adequate jobs for young people at working age. Young adults with college degrees, who mainly relied on work in the public sector and the government, experienced high rates of unemployment. In addition, the nation's social services, housing, and infrastructure have not kept up with the tremendous population growth.[43]

However, a year later, the third round of protests was initiated by rising discontent with the government's policies among many Egyptians, particularly secularists, liberals, and Coptic Christians. The military overthrew President Morsi on the side of the protesters and forcibly put an end to the Muslim Brotherhood's regime. Abdel Fattah Al-Sisi, the head of the army, was elected president in May 2014. Due to these dire economic circumstances, Saudi Arabia,

[42] International Monetary Fund (2014) 'IMF Staff Concludes 2014 Article IV Mission to Egypt'

[43]"Egypt in the Aftermath of the Arab Spring," Accord, April (2015)

United Arab Emirates, and Kuwait donated billions of dollars to Egypt to avoid the political and economic collapse of the Al-Sisi government. These funds were necessary for maintaining the survival of the country. Yet, it was unlikely that financial support from the Gulf would lead to sustainable development and economic growth, given the decline in oil prices and profits. In conclusion, significant reforms were required. [44]

Egypt's structural challenges that rose after the political unrest in the country, including its high public debt, overvalued currency, high unemployment, poorly targeted subsidies, rising public sector wage bill, reliance on food imports, and decreased revenues from the Suez Canal, forced the nation to consider an IMF loan agreement.[45] It had previously relied on Saudi Arabia's contribution which was around $25 billion dollars to maintain its growth in the period between 2013 and 2016, but that was not enough.[46]

In 2016, Cairo formally requested an IMF agreement, when a severe foreign currency shortage started to cripple Egypt's economy, notably the manufacturing sector. But as a prerequisite to IMF approval, Egypt had to raise $6 billion in funds, which it achieved with help from the G7, China, and the UAE. Notably, Saudi Arabia, chose not to provide any contribution this time because it disapproved of president Sissi's support for Bashar al-Assad of Syria.[47] The $12 billion IMF loan to Egypt over three years included a reform agenda with three main focuses: monetary, fiscal, and structural changes. Egypt was supposed to control

[44]"*Egypt in the Aftermath of the Arab Spring*". Accord, April (2015)

[45] Momani. "*Egypt's IMF Program: Assessing the Political Economy Challenges.*" Policy Briefing, Brooking Doha Center, January (2018)

[46] "*Shifting Sands: As Egypt Quarrels with Saudi Arabia, It Is Finding New Friends*," *The Economist*, November (2016)

[47] Youssef, Nour and Hadid, Diaa. "*We Don't Owe Anyone: Egypt Jousts With Its Chief Benefactor, Saudi Arabia*" The New York Times, November (2016)

inflation while making the transition to a flexible exchange-rate system, in which the pound had to be floated (where market forces would set the exchange rate). Fiscally, the nation was supposed to increase spending on youth and women while increasing expenditure on vulnerable groups including the elderly and the poor. Finally, Egypt's structural goals included streamlining industrial licenses, financing SMEs, decriminalizing insolvency, and simplifying bankruptcy regulations.[48]

In January 2022, most Egyptians began to report observable improvements in their living situations and more freedom in their overall microeconomic decision-making. That was the first indication that Egypt had begun to see the results of its difficult but effective economic reform program, which the government had begun in 2016 with assistance from the IMF. Also, the three credit rating companies (Fitch, Moody's, and S&P Global) confirmed Egypt's ratings at B and B+ with a stable outlook. Even during the severe effects of the COVID-19 pandemic in 2020, Egypt managed to advance its economic reform agenda. Egypt was among a small group of countries that experienced growth at the start of 2021. According to the World Bank and IMF, as an emerging market, Egypt had a growth rate of 3.6% for the fiscal year 2019/2020 compared to advanced economies in developed countries which suffered from an economic slowdown due to the pandemic.[49]

One week before the outbreak of the Russia-Ukraine war, the Egyptian Minister of Planning announced in a press conference that Egypt had successfully achieved a growth rate of 8.3% in the second quarter of the fiscal year 2021/2022, compared to a growth rate of only

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[48] "*Online Press Briefing on the Release of the Staff Report on Egypt's Request for and IMF Extended Fund Facility*," IMF, January (2016)

[49] Ziada. "*Chronic Crisis of the Egyptian Economy*". MAJALLA, April (2022)

2% during the second quarter of last year. Also, the inflation rate remained steady between 5% and 7%, and the foreign reserves of the Central Bank of Egypt were over the benchmark of $40 billion. Unfortunately, the economic costs of the Russia-Ukraine war conflict weighed on further achievements. Food and tourism were two of Egypt's most significant economic sectors that were highly affected by the Russia-Ukraine conflict. Thanks to the investments by Arab Gulf countries and contributions by IMF, Egypt will be able to survive the current crisis due to its past experiences in managing various economic crises. Yet, the main concern is to free the Egyptian economy from the compounded stressful conditions underlying its outdated economic system, which is a combination of president Nasser's failed socialism and president Sadat's incomplete liberalism. Rather, the government should adopt a modern economic system that accompanies latest trends and priorities in the global economic system. This would be key to resolving Egypt's chronic economic crisis and internal political conflicts.[50]

B. Background on the Dynamics of Current Account Deficits and Capital Investments

The literature has been various and wide among the determinants and dynamics of the current account in open economies. Current account deficits could have different implications depending on whether they exist in developed or developing countries. One of the most serious problems in emerging economies is increasing current account deficits. CA is a macroeconomic indicator that can be used to determine the viability of an economy because it reflects the intertemporal decisions of foreign and domestic individuals and their

[50] Ziada. "*Chronic Crisis of the Egyptian Economy*" MAJALLA, April (2022)

behavior with respect to saving, investment, and market transactions.[51] Current accounts are used as a measure of both the amount and the direction of foreign money received by an economy, with surplus countries lending to deficit ones. According to Prasad et al. (2006), the current account represents "the total amount of finance flowing into or out of a country" or "the total external capital financing available for investment in a country". In open economies, a country may accrue financial claims (liabilities) against other countries by running a current account deficit. Deficits occur as a result of insufficient domestic saving to finance domestic investments.[52] Also, deficits show that a country is importing (spending more on goods and services) rather than exporting. Hence it will have to borrow funds from abroad to be able to maintain the difference, implying that capital inflows play a major role in the dynamics of the current account balance.

Clark et al (2012) show that in Turkey, current account deficits were mainly due to low domestic savings and its reliance on energy and other imports.[53] Another study on this topic focuses on the aspect of whether the country running a current account deficit is a developed or developing country. Yan and Yang (2008) found that foreign capital inflows Granger-cause current account imbalances in emerging market countries, while for developed economies the causal relationship between foreign capital inflows and the current account is

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[51] Knight, Malcolm, and Scacciavillani, Fabio. “Current Accounts: What is Their Relevance for Economic Policymaking?”, International Monetary Fund. May 1998. p. 4

[52] Clark, Logan, et al. “The External Current Account in the Macroeconomic Adjustment Process in Turkey”. Woodrow Wilson School’s Graduate Policy Workshop. Princeton University. January 2012. p. 6

[53] Clark, Logan, et al. “The External Current Account in the Macroeconomic Adjustment Process in Turkey”. Woodrow Wilson School’s Graduate Policy Workshop. Princeton University. January 2012. p. 12

negligible.[54] Similarly, Yan and Yang (2009) suggest that capital inflows cause severe current account deficits in emerging market economies but not industrialized ones when considering net and gross foreign capital inflows. This suggests that for developed countries, capital flows are used to finance the current account balance rather than reduce it. However, in developing countries the relationship is reversed whereby foreign capital inflows are used to finance investments due to deficiency in savings.

Eita et al. (2019) study on the macroeconomic determinants of the current account balance in Namibia showed that investment to GDP ratio, FDI to GDP ratio and capital flows are associated with a deterioration in the current account balance. This is attributed to the fact that financing and equipping domestic investments increases spending (through importing) and creates a demand for foreign funds.[55] Furthermore, Goyal and Sharma (2019) investigated Granger causality between the current account and capital account with its various components in India. The results showed that FDI, a component of the capital account, Granger-causes gross fixed capital formation which consequently affects the current account deficit.[56] Also, Ersoy (2011) shows that there is a unidirectional causality from the capital account to the current account in Turkey, implying that capital inflows cause current account imbalances.[57] Therefore, we are interested in examining the effect of the current

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[54] Yan, Ho-don and Yang, Cheng-lang. *"Foreign Capital Inflows and the Current Account Imbalance: Which Causality Direction?"*. Feng Chia University. June 2008. p. 437

[55] Eita, Joel Hinaunye., et al. *"Macroeconomic Variables and Current Account Balance in an Open Economy: Evidence from Namibia"*. August 2019. p. 68

[56] Goyal, Ashima and Sharma, Vaishnavi. *"Estimating the Relationship between the Current Account, the Capital Account, and Investments for India"*. Indian Institute of Foreign Trade. (2019). p. 43

[57] Ersoy, Imre. "The Causal Relationship between the Financial Account and the Current Account: The Case of Turkey". University of Marmara, European Union Institute, Department of Economics. 2011.

account deficit on capital investments for the case of Lebanon given it is developing country. We aim to investigate whether there is a causal relationship running from the current account deficit to gross fixed capital formation (GFCF) in Lebanon.

CHAPTER II

OVERVIEW OF THE LEBANESE ECONOMY

The financial collapse of Lebanon in 2020 was foreseen due to the accumulation of imbalances in the economy over the years. In the past 30 years, successive governments in Lebanon have financed budget deficits by selling bonds to Lebanon's banks and the Central Bank, most frequently in dollars (or the Lebanese Lira, which was pegged to the dollar at 1505 Liras). In turn, the banks raised capital by raising interest rates, which attracted a significant amount of deposits made in foreign currencies.[58]

Although the Ta'if agreement was reached in 1989, at the end of the 15-year civil war, Syria did not withdraw its military forces from Lebanon till 2005. As a result, the United States, France, and Arab nations abstained from providing promised donations for the reconstruction of Lebanon in the post-war period. With a focus on larger integration into the global economy, the Ta'if Agreement also significantly deepened the nation's economic liberal system. Neoliberalism in Lebanon was highlighted as the economy was exposed to international investment flows. These investments were primarily directed toward the banking, finance, and real estate industries; strengthening the economy's financial structure while weakening the agricultural and manufacturing sectors.[59] Therefore, in 1992, Lebanon chose to adopt a 2-pronged strategy for reconstruction: relying on internal finance for deficit

[58] Al Chaer, Elie. "*Government, Governance, and the University: The Case for Lebanon*". (2020)

[59] Daher, Joseph. *"Lebanon: How the Post War's Political Economy Led to the Current Economic and Social Crisis."* Middle East Directions. January 2022

financing and exchange rate stabilization and using international cash for immediate reconstruction projects. Before the conflict, when Lebanon was regarded as a significant regional financial hub, the commercial banking industry had historically been the economy's strongest sector. The banking system was perceived as the country's primary internal funding source. It was successful in luring capital inflows from foreign sources and Lebanese immigrants[60]. In the first phase of the strategy, from 1992 – 1997, funds were channeled to finance the infrastructure of the country including road networks, electricity, water, and telephones. However, in the second phase which lasted from 1997 till the present, funds utilization deviated from reconstruction projects to maintaining financial stability and balance of payments equilibrium. This aid was needed to stabilize the Lebanese currency as it was under severe pressure due to the economic and political conditions during the war. The country managed to accomplish several achievements during that period because of the incoming foreign funds. The central bank was able to interfere in the foreign exchange market to protect the currency and the balance of payments recorded a surplus. Also, interest rates on public debt instruments declined due to capital inflows, which in turn gave the government the liquidity and confidence needed to keep borrowing money from domestic and international sources.

A. Policies adopted during Hariri's Government

In 1992, the government budget deficit was 15% of GDP and the inflation rate was high at 120%. Based on a fixed exchange rate-based stabilization strategy (ERBS), the first Hariri government and the central bank employed the nominal exchange rate as an anchor in

[60] Dibeh, Ghassan. "*Foreign Aid and Economic Development in Postwar Lebanon*." United Nations University. June 2007. p. 1

the post-1992 stabilization program to fight inflation and attain external balance. In an economy with a high degree of dollarization, large movements in velocity, and high inflation, the fixed-exchange-rate strategy may be effective to reduce inflation and stabilize prices. However, if the underlying political and financial conditions in the country were at risk, such a strategy may lead to severe deterioration and the program's collapse. These disruptive dynamics can be summarized by "*exchange-rate-based stabilization syndrome*": initial expansion of the economy, large capital inflows, wide external imbalances, balance-of-payments deficits, and currency devaluation.[61] ERBS strategy required substantive foreign exchange reserves and the elimination of the inflationary financing strategy that defined government expenditures in the 1980s.[62] The reconstruction boom in the post-war period ended due to the ERBS policy, with ongoing deficits and rising public debt. To rescue the country from the financial crisis and economic recession, the Hariri Government opted to seek foreign aid to be used as direct deposits with the central bank. The aim of these deposits was to elevate reserves, calm currency markets, and repair confidence in the government's ability to collect foreign funds during crises. However, excess borrowing and high inflows of foreign funds led to a significant increase in external debt during 1998.[63]

Prime Minister Rafic Hariri embraced a vision for Lebanon to liberalize capital flows and deregulate the taxation system. "Horizon 2000: for Reconstruction and Development" is a document that outlines Hariri's reconstruction ambitions. This document was a $14.3 billion

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[61] Sobolev, Yuri. *"Exchange-Rate-Based Stabilization: A Model of Financial Fragility."* June 2000. p. 3

[62] Dibeh, Ghassan. "*Foreign Aid and Economic Development in Postwar Lebanon*." United Nations University. June 2007. p. 5

[63] Ibid. p. 7

sectoral and regional expenditure initiative that ran from 1993 to 2002, followed by another budget program of $18 billion from 1995 to 2007. However, the geographic allocation of the funds for reconstruction reflected regional disparities that existed before the Civil War, where Beirut and Mount Lebanon received 80% of the investments. These initiatives were characterized by the ambiguity between public and private property, and they embedded Hariri's rising political and financial influence. In 2002, new regulations were implemented for the purpose of privatization, where the telecommunication, electricity, and water sectors were privatized. Also, with the aim of boosting FDIs, new laws were indorsed to attract foreign investments, including removing restrictions on property ownership and reducing taxes for foreign investors.[64] According to Ghassan Ayache – vice governor of Banque Du Liban from 1991 to 1993, Hariri created a three-party agreement between the government, BDL, and commercial banks, where banks commit to financing government debt in exchange for high-interest rates.[65] BDL managed to stabilize the Lebanese currency at 1500 LBP per dollar in 1998 to ensure the inflow of capital from abroad. Furthermore, the issuance of Eurobonds at relatively high rates allowed banks to provide competitive returns for Dollar deposits, luring in foreign capital. Hence, the BDL was able to increase its foreign exchange reserves. As per Ayache, the opportunity cost for maintaining a fixed exchange rate was remarkably high for the whole economy. Public debt increased 29 times from 1993 to 2018,

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[64]Daher, Joseph. *"Lebanon: How the Post War's Political Economy Led to the Current Economic and Social Crisis."* Middle East Directions. January 2022

[65] Al-Attar, Sahar and Rozelier, Muriel. "*From a Merchant Republic to Rentier Capitalism – A Story of Failure*", Commerce du Levant. 2019

while GDP increased by only 9 times in the same period. Also, the debt-to-GDP ratio increased from 50% to 155%.[66]

[66] Ibid.

B. Post-Hariri Era

The fact that such policies were still implemented by successive governments following the Syrian army's withdrawal from Lebanon and Hariri's assassination in 2005, exacerbated conditions in the economy further. The services sector's contribution to GDP was 78.85% in 2019, while manufacturing and agriculture contributions were 5.6% and 3% respectively.[67] This weakness in the productive sectors in Lebanon was mainly due to the country's high reliability on foreign inflows and remittances from the Lebanese diaspora. Moreover, between 2005 and 2015, $94 billion of foreign capital were attracted to the country; of which $72 billion were invested in the real estate sector and used for importing consumer products, while $22 billion were utilized as deposits in banks to reimburse the sovereign debt.[68] Notably, only two sectors were the state's main interest: real estate and banks, in which the political class had significant investments. Nevertheless, the Syrian conflict, which began in 2011, left Lebanon struggling to deal with its aftereffects. The two nations had strong economic, trade, and political relations, thus the worsening in Syria's economy exacerbated economic conditions in Lebanon and reduced trust in the country's financial sector, as it was considered the most reliable sector in the Lebanese economy. As a result, remittances declined, leading to further political paralysis in the country. Also, Sunni Muslim Gulf countries abstained from further support for the country, as Iran's influence grew in Lebanon. Thus, the budget deficit soared and the balance of payments plummeted.[69]

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[67] World Bank Data

[68] Al-Attar, Sahar and Rozelier, Muriel. "*From a Merchant Republic to Rentier Capitalism – A Story of Failure*". Commerce du Levant. (2019)

[69] Blair, Edmund. "Explainer-Lebanon's financial meltdown and how it happened." Reuters. June 2021

Furthermore, the public deficit continued to grow due to inflation, corruption, and high debt levels. An aggressive program of trade liberalization was encouraging an increase in imports as well, which increased the deficit in the balance of trade. Public policies were merely focused on attracting even more capital, to enable BDL to maintain the currency exchange rate and finance public debt, rather than addressing the twin deficit, fiscal and current.[70] Besides all that, in 2016, Governor of the Central Bank since 1993 and former Merrill Lynch banker Riad Salame, initiated a financial engineering strategy, known as the "Ponzi Scheme" that included a set of measures offering remarkable interest rates for dollar deposits and even higher rates for Lebanese pounds deposits.[71]

Therefore, we can realize that the pre-crisis period of turbulence was highly affected by the start of the Syrian conflict, the huge entry of Syrian refugees, the economic repercussions (such as the closure of trade routes, sharp fluctuations in oil prices, and declines in tourism), and political/security unrest. By 2014, there were 1,067,785 Syrian refugees, accounting for one in four residents of Lebanon. Furthermore, it is known that as a result of the 1948–1967 Arab–Israeli war, 449,957 Palestinians moved to Lebanon, including 53,070 Palestinians from Syria who left in search of safety due to the circumstances in Syria. The Syrian refugees make up about 40% of healthcare visits, which weighs more on the facilities' resources and personnel.[72] Also, the mismanagement of the Central Bank revealed in the substantial expansion of financial engineering policies in order to avoid or delay a sudden stop scenario

[70] Al-Attar, Sahar and Rozelier, Muriel. "*From a Merchant Republic to Rentier Capitalism – A Story of Failure*", Commerce du Levant. 2019

[71] Blair, Edmund. "Explainer-Lebanon's financial meltdown and how it happened." Reuters. June 2021

[72] Youssef, Jamil. "Economic Overview: Lebanon". January 2020.

added to the already-existing disproportions. Moreover, the rise in public financial spending due to excess hiring in the public sector and military, as well as wage and tax increases worsened the whole structure of the economy.[73]

C. Crisis Period

1. *October 17th, 2019 Revolution*

The Lebanese economy did not only suffer from an economic and financial crisis but also the global pandemic and the Port of Beirut explosion had tragic consequences and severe repercussions. The economic and financial crisis had the biggest most enduring negative effects and may rank among the top three economic breakdowns in the world since the 1850s.[74]

Economic and financial imbalances had been brewing over the years. Hence, the October 17th, 2019 revolution was an accumulation of failing policies and national losses. As mentioned above, over the past 30 years, Lebanon has been financing its fiscal deficit by selling bonds to the Central Bank and commercial banks.[75] In turn, these banks raised capital by offering substantially high interest rates on deposits which finally led to government debt surpassing 170% of GDP. However, this scheme came to an end once dollar inflows stopped and the ongoing deficit was no longer being covered. The protests demonstrated by Lebanese people flooding the streets were triggered by the government's decision to impose a

[73] World Bank. *"Lebanon Public Finance Review, Ponzi Finance?"*. July 2022

[74] Ibid. p. 65

[75] Al Chaer, Elie. "*Government, Governance, and the University: The Case for Lebanon*". 2020

"WhatsApp tax" as a part of austerity measures. Similar to all other forms of aid or capital inflows, in 2018, at the CEDRE international donor conference in Paris, more than $11 billion dollars was assigned to boost the Lebanese economy. Yet, this aid was conditional on prerequisite reforms that the government was never able to implement due to political disputes among its members.[76] During that month, the economy fell deep into a recession due to a sudden stop in capital inflows which caused disruption in the infrastructure of the whole financial and monetary system. This included a failure of the banking sector, a significant decline in deposits, a currency crisis that lost more than 80% of its value, and extremely high inflation rates hitting 155% in 2021[77]. The trade deficit exceeded 20% of GDP in 2019 reaching 31% of GDP in 2020[78] and the current account deficit was at 22% of GDP in 2019[79]. Also, the real GDP growth rate was almost negligible prior to 2019 and deteriorated to a negative level of -26% of GDP in 2020.

Furthermore, the government of Lebanon experienced its first-ever sovereign default on March 7, 2020, when it stopped paying its Eurobonds. The Eurobond default halted prospects for additional external financing.[80] The Central Bank ceased its aggressive interventions to protect the exchange rate of the lira, which had been a long-standing official policy dictated by all ministerial pronouncements, with the government's consent. As a result, a parallel exchange rate and market have emerged and BDL undermined its impact, losing control of

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[76] L'Orient-Le Jour.*" Lebanon's October 2019 protests weren't just about the WhatsApp tax"*. October 2021.

[77] World Bank.

[78] Macro Trends.

[79] Wold Bank.

[80] World Bank. *"Lebanon Public Finance Review, Ponzi Finance?"*. July 2022

the exchange rate. Banks abruptly shut their doors at the beginning of the protests, presumably avoiding a surge in withdrawals from depositors who had lost trust in the system.[81] Later, in an attempt to provide liquidity, BDL created multiple exchange rates named "Lollar", which expanded with time, starting with (LL3,900), whereby citizens with bank accounts were able to withdraw a limited amount of foreign currency converted into Lebanese Lira at 3,900 rate. Then, the rate increased to LL8,000. Since 1997, the Lebanese pound (LBP) was fixed at a rate of USD/LBP = 1507, and after the crisis in 2019, the pound witnessed a severe depreciation over a 3-year period, reaching USD/LBP = 25000 in Dec-2021 and USD/LBP = 45,000 in Dec-2022. Therefore, Lebanese people were tangled between a multiple exchange rate system (official rate, banks' rate, black market rate), which highly impacted their purchasing power and created volatility in their daily operations (rentals, goods, and services).

The subsidy program established covered what was considered fundamental necessities. The increased subsidies helped a wide range of products, including fuels, medical supplies, manufacturing inputs, and even food items. Without any remaining funds to cover the subsidies, the State, acting through the Central Bank, turned to the remaining gross foreign currency reserves, which were already in deficit. As a result, the foreign exchange reserves plummeted even faster and distorted market prices, which smugglers quickly used to transport the subsided items into other nations. Shortages occurred as the subsidized amounts approached their maximum permitted size.

[81] El Hafez, Ramzi. *"A Time for Suicide: Economic, Fiscal, and Monetary Crises*". Leaders Club by Lebanon Opportunities. September 2021.

Also, Electricity provided by Electricité du Liban (EDL) was significantly impacted by the crisis and was reduced to two to three hours per day.[82] Despite all the economic challenges, the rising cost of living was seen as the biggest concern. About half of the population wants to emigrate in search of better opportunities abroad. However, when asked why they wanted to do so, people did not refer to economic conditions as their primary concern. Instead, corruption was the most common reason, which shows that people are extremely upset and unsatisfied with the failure of the governing body, which in turn led to the economic fallout.[83] Eighty-nine percent of the population say that corruption is widespread and dominating governmental institutions to a significant extent, which is relatively considered the highest in any country surveyed in Arab Barometer's sixth wave.[84]

2. ***COVID-19 Pandemic***

A few months after the uprising, the COVID-19 pandemic hit Lebanon hard at times when there were political and economic imbalances in the country. Hence, the government had to adopt certain measures to mitigate the socioeconomic magnitudes and health consequences of the virus. The pandemic worsened pre-existing employment and education disproportions limiting opportunities for vulnerable populations.[85] The youth suffered from structural complications including inadequate education systems and a weak electricity sector, which made it more difficult to combat the challenges that emanated from the pandemic (lockdown, online learning, and availability of electronic equipment…). Given that

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[82] El Hafez, Ramzi. *"A Time for Suicide: Economic, Fiscal, and Monetary Crises*". Leaders Club by Lebanon Opportunities. September 2021.

[83] Arab Barometer, Wave VI. "Lebanon Country Report. 2021

[84] Ibid.

[85] ILO, UNICEF. "*Synthesis of the crisis impact on Lebanon".* June 2022

already half of the population is below the poverty line, the social impact was catastrophic. The unemployment rate increased to 29.6% in 2022 from 11.4% in 2018-2019.[86] The consequences of the adjustments proposed by the Central Bank weighed highly on smaller depositors and Small and Medium Enterprises (SMEs). A substantial currency devaluation, triple-digit inflation, and a drop in average income all significantly reduced purchasing power.[87]

After the pandemic, the healthcare system in Lebanon had negative feedback from the citizens. Only 17% of the population revealed that they were satisfied with the healthcare system, which is considered the lowest percentage among the countries surveyed. Also, people were extremely upset with how the government handled the COVID-19 situation in Lebanon, as 16% only gave positive feedback. Speaking of education, 87% believed that the pandemic had negative implications for the educational system. These negative consequences were inevitable and go back to many years of mismanagement due to weak government contributions and financing in the education sector. Nevertheless, COVID had drastic effects on labor markets, as almost 20% of whom were employed before the pandemic revealed that they have lost their jobs due to the virus.[88]

3. ***Port of Beirut Explosion***

Finally, all the above challenges were compounded by the massive and tragic explosion of the Port of Beirut on August 4, 2021. This severe incident had detrimental repercussions

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[86] World Bank. Overview. November 2022.

[87] Ibid.

[88] Arab Barometer, Wave VI. "Lebanon Country Report. 2021

at the national level including hundreds of deaths and the destruction of homes and businesses in Beirut. Long-term structural vulnerabilities were highly pressured, such as limited water supplies, insufficient solid waste and wastewater management, and a dysfunctional electricity sector, besides poor public financial management and significant macroeconomic imbalances. The World Bank Group, in collaboration with the UN and the EU, launched a Rapid Damage and Needs Assessment (RDNA) to determine the aftermath of the explosion. According to the RDNA evaluation, the total cost of the direct damage was between US$3.8 and US$4.6 billion, and the losses to financial flows were between US$2.9 and US$3.5 billion.[89] According to the Arab Boremeter survey, the majority of Lebanese people did not view the port explosion as a random disastrous incident but rather as a component of the country's larger problems. Two-thirds of respondents who were asked to identify the main reason behind the port explosion pointed to government corruption and carelessness. Comparatively, only 1 in 5 people attributed the incident to terrorism, while 5% or fewer people claimed it was an accident or the work of a domestic or foreign actor.[90]

Following the explosion, France took the initiative and organized a donor conference with the participation of 36 nations and donor organizations. Presidents of the United States and France were among those in attendance. For immediate help, $300 million were promised at the summit. The World Bank Group (WBG), the European Union (EU), and the United Nations (UN) developed a $2.6 billion, 18-month reform, recovery, and reconstruction response plan in response to the conference to address the consequences resulting from the

[89] World Bank. Overview. November 2022.

[90] Arab Barometer, Wave VI. “Lebanon Country Report. 2021

explosion. The "Lebanon Reform, Recovery and Reconstruction Framework (3RF)" offers an action plan on how to manage various sectors over the next 18 months based on extensive consultations with the government, civil society, and donors.[91]

[91] El Hafez, Ramzi. *"A Time for Suicide: Economic, Fiscal, and Monetary Crises*". Leaders Club by Lebanon Opportunities. September 2021.

CHAPTER IV

DATA AND METHODOLOGY

A. Macro Trends in Lebanon

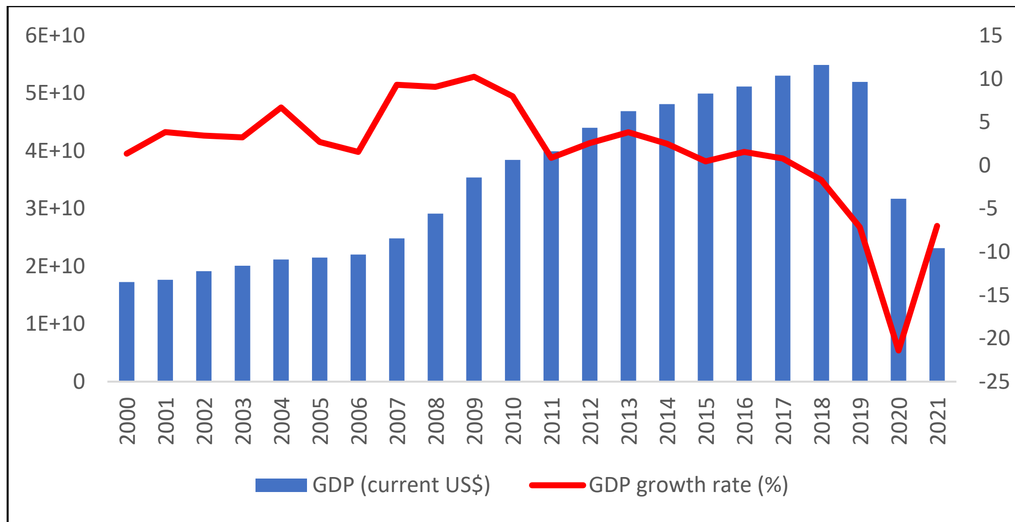

Figure 1: Gross Domestic Product[92]

Since 2016, the GDP growth rate has been declining from 1.55% reaching -21% in 2020. In 2021, it recovered to the pre-crisis (2019) level of -7%. Nevertheless, in only 2 years, GDP fell from $55bn to $25bn

[92] World Bank

1. Inflation Rate

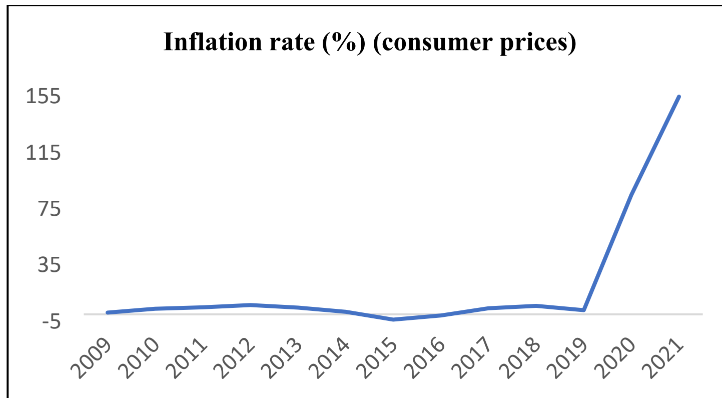

Figure 2: Inflation Rate[93]

The inflation rate in Lebanon averaged 3% from 2009 till 2018. However, after the October 17th, 2019 uprising, the inflation rate started rising, surging from 3% in 2019 to 85% in 2020 after the coronavirus pandemic and the port of Beirut explosion. It then increased to 155% in 2021 following the uncertainty among citizens and the failure of the government to implement any reforms.

2. Unemployment Rate

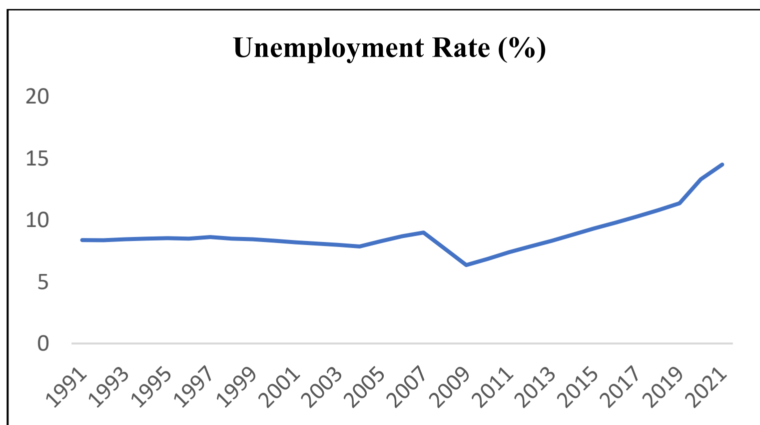

Figure 3: Unemployment Rate[94]

[93] World Bank

[94] Ibid

According to a survey conducted by the International Labor Organization (ILO) and Central Administration of Statistics (CAS) – Lebanon Follow-up Labor Force Survey – January 2022, the unemployment rate increased to 29.6% in January 2022.[95]

3. Debt-to-GDP Ratio

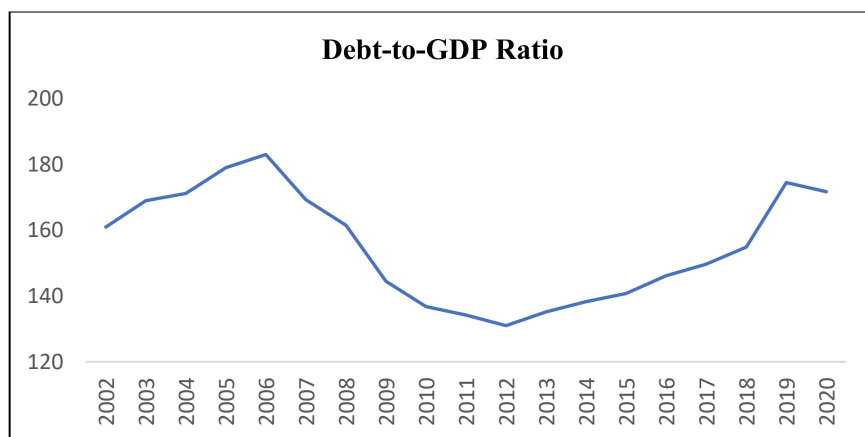

Figure 4: Debt-to-GDP Ratio[96]

Since 2012, Lebanon has been witnessing an increasing debt-to-GDP ratio, reaching 171% in 2020. Post-war reconstruction costs indebted the country. Moreover, interest payments consumed nearly half of government payments, paralyzing public finances.

[95] Lebanon's (CAS) and (ILO) release the findings of the Lebanon Follow-up Labor Force Survey -January 2022.

[96] Trading Economics

4. *Current Account Balance*

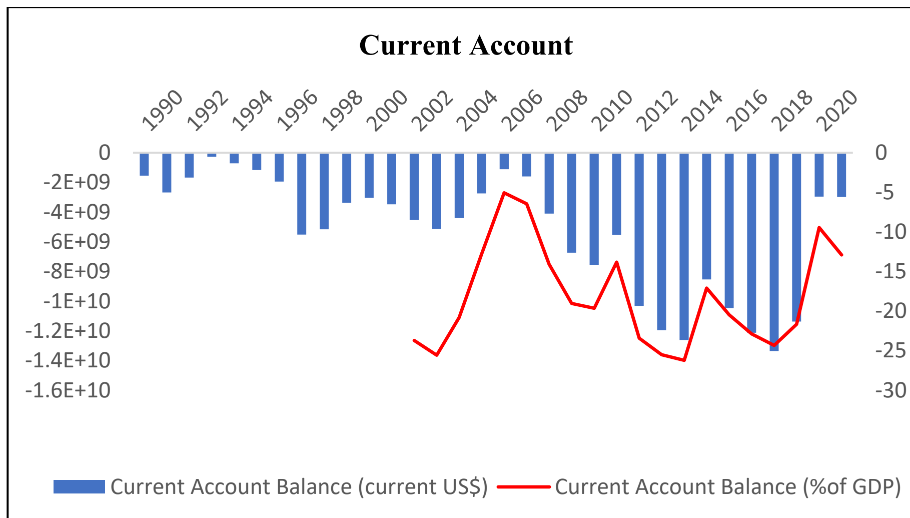

Figure 5: Current Account Balance[97]

The current account balance which happens to be a deficit in Lebanon is a key indicator in our thesis. By definition, *CAB = (Exports – Imports) + (Net Income Abroad + Net Current Transfers)* or we can also say that: *CAB* = (*Saving – Investments*)*.* Lebanon's current account deficit traces back to a negative trade balance, due to low productivity. Consequently, Lebanon will experience a fall in savings which causes a current account deficit. It stands at -12% in 2020.

5. *Trade Balance*

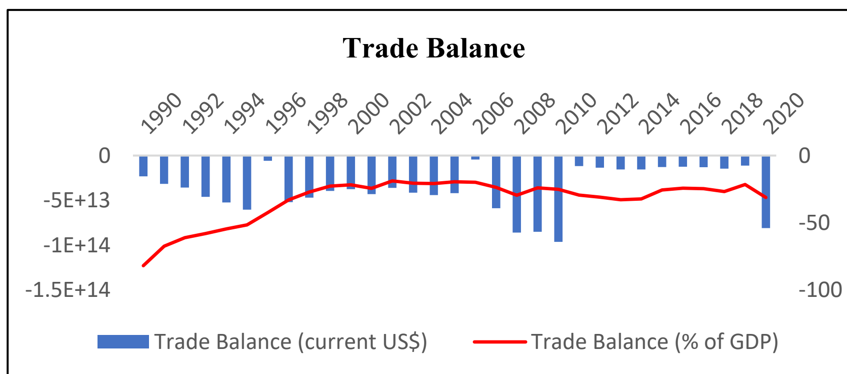

Figure 6: Trade Balance[98]

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[97]Trading Economics for CA Balance in US$ and World Bank Group for CA Balance (% of GDP)

[98] Macro Trends

Lebanon has always been experiencing a trade deficit since its imports outweigh its exports. Lebanon is an importing country due to weak production sectors. Manufacturing, value added (% of GDP) decreased from 13% in 1994 to 1% in 2021. Industry, value added stands at 2.8% of GDP in 2021. Also, agriculture contributes to only 1.4% of the GDP in 2021. The trade deficit surged to $81 trillion in 2020 from $11 trillion in 2019. [99]

6. Foreign Direct Investment

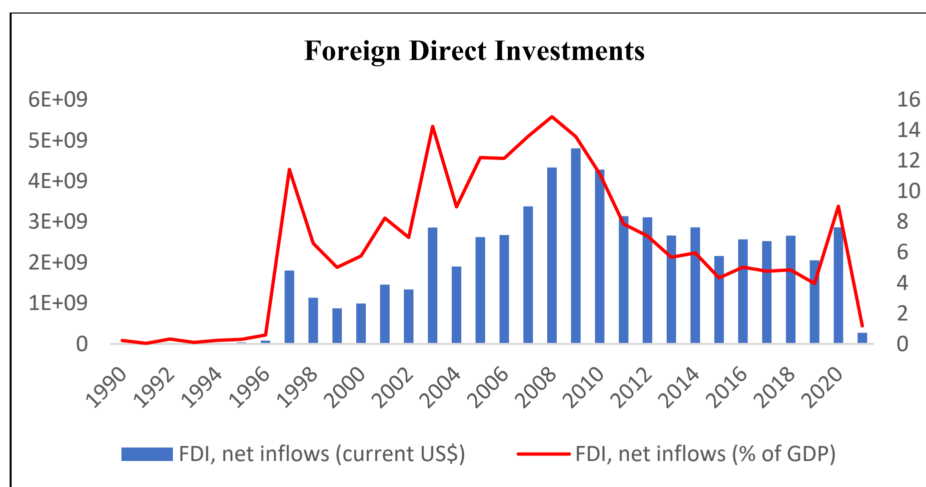

Figure 7: Foreign Direct Investments[100]

By definition, foreign direct investment refers to direct investment equity flows in the reporting economy. It is the sum of equity capital, reinvestment of earnings, and other capital. FDI (% of GDP) witnessed a huge fall in one year from 9% in 2020 to 1.2% in 2021.

[99] World Bank.

[100] World Bank

7. Gross Fixed Capital Formation

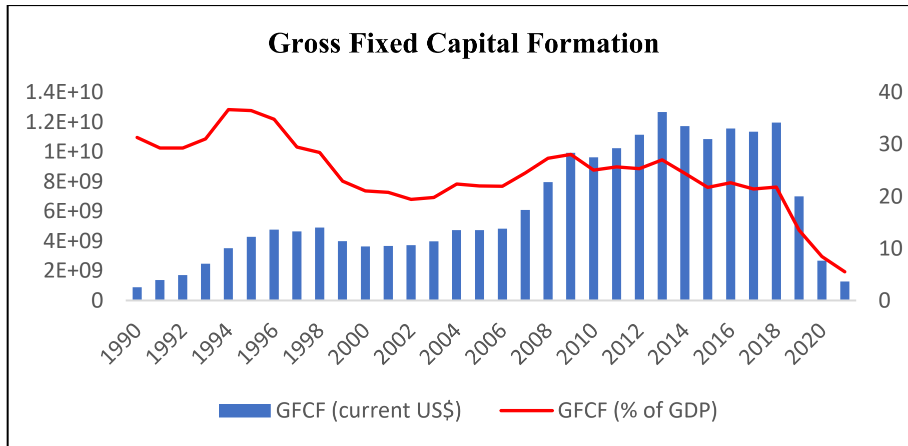

Figure 8: Gross Fixed Capital Formation[101]

Gross fixed capital formation (formerly gross domestic fixed investment) includes land improvements (fences, ditches, drains); plant, machinery, and equipment purchases; and the construction of roads, railways, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. GFCF is used as an indicator for capital investments in Lebanon in our model. We can see that after the crisis, Lebanon witnessed a huge fall in investments during 2020-21. Since 2008, GFCF averaged 25% of GDP for 10 years. Yet, it plummeted to 5.5% in 2021.

B. Empirical Methodology

The Mundell-Fleming is a small open economy that is used to analyze the relationship between monetary policy, fiscal policy, and the balance of payments. The model consists of three equations: the IS equation, the LM equation, and the BP equation. It assumes international capital mobility, imperfect substitutability between domestic and foreign goods, a fixed aggregate price level, and variable real output. The model has proven very useful in studying the dynamics of the current account balance and capital investments. For instance,

[101] World Bank

an expansionary fiscal policy under a fixed exchange rate and high capital mobility, leads to current account imbalances due to capital inflows encouraged by higher interest rates that result from expansionary policies on income and money demand.[102] However, M-F model focuses on the short run and disregards the impact of economic policies on the current account balance in the long run. [103]

The current account Balance can be defined as:

$$CA_t = X_t - M_t + TR_t + NFI_t$$

Where CA_t denotes current account balance in a period t, X_t and M_t denote exports and imports respectively, TR_t denotes net current transfers, and NFI_t represents net factor income from abroad at time t.

As a result of the real exchange rate misalignments and current account deficits and surpluses, economists opted to look for better explanations of the current account developments with an emphasis on the identity between savings-investment gap and the current account balance:[104]

[102] Knight, Malcolm, and Scacciavillani, Fabio. "Current Accounts: What is Their Relevance for Economic Policymaking?", International Monetary Fund. May 1998. p. 6

[103] Ibid. p. 7

[104] Ibid. p. 7

Starting with the gross domestic product (GDP) which measures total market value of all goods and services, defined by:

$$Y_t = C_t + I_t + X_t - M_t$$

Where Y_t denotes GDP, C_t denotes private and public investment, I_t denotes private and public investments. Gross national disposable income is defined as GDP plus net current transfers and net factor income:

$$GDI_t = Y_t + TR_t + NFI_t$$

National savings (S) is GDI minus consumption:

$$S_t = GDI_t - C_t$$

Rearranging the above equations, the current account balance can be written as:

$$CA_t = S_t - I_t$$

Classifying the economy into private (p) and government (g) sectors, the above equation can be expressed as:

$$CA_t = Sp_t + Sg_t - Ip_t - Ig_t$$

A shock to output causes a decline in output. But given the same level of consumption, then savings will decline which in turn leads to a current account deficit.[105] Nevertheless, during periods of high investments, capital inflows are required. These capital

[105] Carranza, L. "Current Account Sustainability". April 2002. p. 6

inflows are a credit on the capital account but matched by a deficit on the current account. A currency appreciation may result from these inflows, which increases imports and in turn deteriorates the current balance.[106]

However, we wish to examine if current account imbalances may have implications on investments in developing countries. We choose Lebanon as the case of study. In order to investigate the impact of the current account deficit on capital investments (GFCF) in Lebanon, we use the Vector Autoregression model (VAR). VAR helps us to empirically investigate the relationship between a set of variables that change over time. The variables included in the model are: inflation, GDP per capita, trade balance, current account balance, FDI, and GFCF (which is used as an indicator for capital investments in Lebanon). The dataset including inflation, GDP per capita, FDI, and GFCF is from World Bank. Whereas, the trade balance data is from Macro Trends and the current account balance data is from Trading Economics. However, the model does not include any data for *"remittances"* in Lebanon due to the lack of available data prior to 2000. This might affect the value of R^2 which measures the relationship between the dependent and independent variables. The time series data is comprised of 29 observations over the period of 31 years from 1990 – 2021.

The methodology is optimal as it allows us to study the causal relationship between the variables proposed in a time series, using the Granger Causality test. The method is a probabilistic interpretation of causality; it uses empirical datasets to find patterns of correlation. In order to attain stationarity of the variables in the Granger causality test, we

[106] Goyal, Ashima and Sharma, Vaishnavi. *"Estimating the Relationship between the Current Account, the Capital Account, and Investments for India".* Indian Institute of Foreign Trade. (2019). p. 33

transformed the non-stationary data by the first-differencing method, which may be considered a limitation in our study. According to this test, the null hypothesis is that there is no causation between the predictor variables (independent variables) and the target variable (dependent variable). In hypothesis testing, the p-values are used to determine whether the observed results are statistically significant or occur by chance. If the p-value is set at 0.05, then the null hypothesis is rejected if the p-values are smaller than that and it can be concluded that the observed results are statistically significant. If the p-values are greater than 0.05 then we accept the null and the observed results are not statistically significant.

Moreover, we applied the same test to data from Greece and Cyprus, which allows us to conduct a comparative analysis and have a better understanding of the results obtained. However, the dataset used in the test for these two countries includes *"remittances"* and all the remaining variables that are included for Lebanon. (Inflation, GDP per capita, FDI, GFCF, current account balance, trade balance)

Finding a connection between these variables helps us understand how investments in the economy work, how they are impacted, and what are their consequences given the conditions and limitations in our country. It is important for economists to assess the impact of various policy actions on the current account dynamics in small open economies.

CHAPTER V

FINDINGS AND RESULTS

	DGFCF	DTRADE	DINFLATION	DGDPPC	DCAD	DFDI
DGFCF(-1)	0.553275	0.606188	-1.43E-08	4.12E-07	1.362458	0.014661
	(0.41914)	(0.44229)	(4.9E-09)	(1.2E-07)	(0.57669)	(0.23125)
	[1.32004]	[1.37056]	[-2.91662]	[3.42606]	[2.36256]	[0.06340]
DGFCF(-2)	0.919859	0.329295	-1.05E-08	3.24E-07	-1.242324	0.111022
	(0.54106)	(0.57095)	(6.3E-09)	(1.6E-07)	(0.74444)	(0.29852)
	[1.70012]	[0.57675]	[-1.66577]	[2.08397]	[-1.66881]	[0.37191]
DTRADE(-1)	0.215487	0.048700	1.91E-09	1.37E-07	0.084043	-0.097864
	(0.37409)	(0.39476)	(4.4E-09)	(1.1E-07)	(0.51471)	(0.20640)
	[0.57602]	[0.12337]	[0.43823]	[1.27625]	[0.16328]	[-0.47415]
DTRADE(-2)	-0.284680	-0.266607	6.19E-09	-2.88E-07	0.032112	0.132583
	(0.34393)	(0.36293)	(4.0E-09)	(9.9E-08)	(0.47321)	(0.18976)
	[-0.82773]	[-0.73459]	[1.54182]	[-2.91386]	[0.06786]	[0.69870]
DINFLATION(-1)	13958207	19721697	-0.427135	7.836744	8553941.	-28331.78
	(1.6E+07)	(1.7E+07)	(0.18343)	(4.50743)	(2.2E+07)	(8663823)
	[0.88888]	[1.19016]	[-2.32866]	[1.73863]	[0.39591]	[-0.00327]
DINFLATION(-2)	4173504.	8564051.	-0.359220	-2.779447	-11985789	1364821.
	(1.5E+07)	(1.6E+07)	(0.17805)	(4.37521)	(2.1E+07)	(8409688)
	[0.27381]	[0.53244]	[-2.01758]	[-0.63527]	[-0.57151]	[0.16229]
DGDPPC(-1)	-197607.6	-349507.1	-0.010850	0.363975	991155.3	478164.7
	(903287.)	(953193.)	(0.01055)	(0.25928)	(1242827)	(498368.)
	[-0.21877]	[-0.36667]	[-1.02835]	[1.40379]	[0.79750]	[0.95946]
DGDPPC(-2)	-1073769.	1267610.	0.015004	-0.776975	-103745.6	-676953.2
	(1082406)	(1142208)	(0.01264)	(0.31069)	(1489275)	(597193.)
	[-0.99202]	[1.10979]	[1.18669]	[-2.50077]	[-0.06966]	[-1.13356]
DCAD(-1)	-0.233504	-0.151394	2.92E-09	-1.46E-07	-0.167767	-0.002329
	(0.20488)	(0.21620)	(2.4E-09)	(5.9E-08)	(0.28189)	(0.11304)
	[-1.13972]	[-0.70026]	[1.22054]	[-2.48564]	[-0.59515]	[-0.02060]
DCAD(-2)	-0.343718	-0.388899	-1.87E-09	4.50E-09	-0.012908	-0.141978
	(0.22359)	(0.23594)	(2.6E-09)	(6.4E-08)	(0.30764)	(0.12336)
	[-1.53727]	[-1.64828]	[-0.71777]	[0.07015]	[-0.04196]	[-1.15092]
DFDI(-1)	0.103137	-0.378698	3.72E-09	1.39E-07	-0.192065	-0.348893
	(0.50914)	(0.53727)	(5.9E-09)	(1.5E-07)	(0.70052)	(0.28091)
	[0.20257]	[-0.70486]	[0.62589]	[0.95335]	[-0.27417]	[-1.24203]
DFDI(-2)	0.277026	0.069278	9.31E-09	9.65E-09	-0.777322	0.244499
	(0.53602)	(0.56564)	(6.3E-09)	(1.5E-07)	(0.73751)	(0.29574)
	[0.51682]	[0.12248]	[1.48675]	[0.06270]	[-1.05398]	[0.82674]
C	2.22E+08	10266182	-0.166128	206.0914	1.68E+08	1.47E+08
	(3.9E+08)	(4.1E+08)	(4.54554)	(111.700)	(5.4E+08)	(2.1E+08)
	[0.57017]	[0.02500]	[-0.03655]	[1.84504]	[0.31314]	[0.68461]
R-squared	0.519271	0.420863	0.744762	0.864036	0.654998	0.510978
Adj. R-squared	0.158723	-0.013490	0.553334	0.762063	0.396247	0.144212
Sum sq. resids	3.11E+19	3.46E+19	4237.063	2558597.	5.88E+19	9.45E+18
S.E. equation	1.39E+09	1.47E+09	16.27318	399.8904	1.92E+09	7.69E+08
F-statistic	1.440229	0.968943	3.890552	8.473192	2.531383	1.393199
Log likelihood	-643.1161	-644.6756	-113.4220	-206.2705	-652.3701	-625.8698
Akaike AIC	45.24939	45.35694	8.718759	15.12210	45.88759	44.05998
Schwarz SC	45.86231	45.96986	9.331684	15.73503	46.50052	44.67291
Mean dependent	-15059280	1.96E+08	1.812627	88.82578	45006665	8779211.
S.D. dependent	1.52E+09	1.46E+09	24.34899	819.8043	2.47E+09	8.31E+08

Table 1: VAR Model Results

Dependent variable: DGFCF

Excluded	Chi-sq	df	Prob.
DTRADE	0.932404	2	0.6274
DINFLATION	0.817475	2	0.6645
DGDPPC	1.196476	2	0.5498
DCAD	4.023582	2	0.1337
DFDI	0.289565	2	0.8652
All		8	---

Table 2: The Granger Causality of the variables on GFCF in Lebanon

The above table shows that while studying the impact of the above independent variables on GFCF, there is no evidence of any effect on GFCF. According to the Granger causality test, we accept the null hypothesis that there is no proof of causation between the predictor variables (TB, inflation, GDPPC, CAD, and FDI) and the target variable (GFCF). Hence, to answer the main question, we conclude that there is no proof of the current account deficit or the trade deficit's impact on investments (GFCF) in Lebanon.

Dependent variable: DGFCF

Excluded	Chi-sq	df	Prob.
DTB	1.701246	2	0.4271
DREM	2.637909	2	0.2674
DINF	0.169387	2	0.9188
DGDPPC	1.784483	2	0.4097
DFI	0.074832	2	0.9633
DCAD	0.717527	2	0.6985
All		4	---

Table 3: The Granger Causality of the variables on GFCF in Greece

Similarly for Greece, the above table shows that there is no evidence of any impact of the predictor variables on GFCF (target variable).

Dependent variable: DGFCF

Excluded	Chi-sq	df	Prob.
DTB	0.018435	2	0.9908
DREM	4.504631	2	0.1052
DINF	0.254586	2	0.8805
DGDPPC	2.365735	2	0.3064
DFDI	2.779920	2	0.2491
DCAD	2.598154	2	0.2728
All		7	---

Table 4:The Granger Causality of the variables on GFCF in Cyprus

Similarly for Cyprus, the above table shows that there is no evidence of any impact of the predictor variables on GFCF (target variable).

In light of the observed results and the fact that there was no evidence of any effect, we would like to examine the impact of GFCF on CAD. We test if there might be a reverse causality between these variables.

Dependent variable: DCAD

Excluded	Chi-sq	df	Prob.
DGFCF	9.976698	2	0.0068
DTRADE	0.033763	2	0.9833
DINFLATION	0.547534	2	0.7605
DGDPPC	0.649954	2	0.7225
DFDI	1.138426	2	0.5660
All		8	---

Table 5: The Granger Causality of the variables on the Current Account Deficit in Lebanon

Table 5 shows the exact opposite of our main question. The main question was whether the CAD impacts GFCF in Lebanon; and as revealed in Table 2, there is no evidence of any effect. However, the results observed in Table 5 for GFCF with p-value = 0.0068 < 0.05, are considered to be statistically significant. In other words, the results show that we reject the null for the Granger Causality test and we can say that there is a causal relationship between GFCF and the CAD in Lebanon. Hence, we notice that the opposite is true, whereby, GFCF impacts the CAD for Lebanon's case.

Dependent variable: DCAD

Excluded	Chi-sq	df	Prob.
DTB	1.826186	2	0.4013
DREM	1.584931	2	0.4527
DINF	0.496507	2	0.7802
DGFCF	5.848004	2	0.0537
DGDPPC	7.662223	2	0.0217
DFI	0.988766	2	0.6099
All		5	---

Table 6: The Granger Causality of the variables on the Current Account Deficit in Greece

The Granger Causality test in Table 6 also shows significant results for Greece. With p-values = 0.0217 for GDPPC, we reject the null hypothesis. As for the GFCF, the p-value = 0.0537 which is very close to 0.05 and can be considered statistically significant. We infer that GDPPC and GFCF do have an impact on the CAD in Greece.

Dependent variable: DCAD

Excluded	Chi-sq	df	Prob.
DTB	0.857991	2	0.6512
DREM	5.396130	2	0.0673
DINF	1.735119	2	0.4200
DGFCF	4.069225	2	0.1307
DGDPPC	0.517401	2	0.7721
DFDI	1.956231	2	0.3760
All		6	---

Table 7: The Granger Causality of the variables on the Current Account Deficit in Cyprus

In Cyprus, none of the observed results are considered statistically significant. Hence, we accept the null.

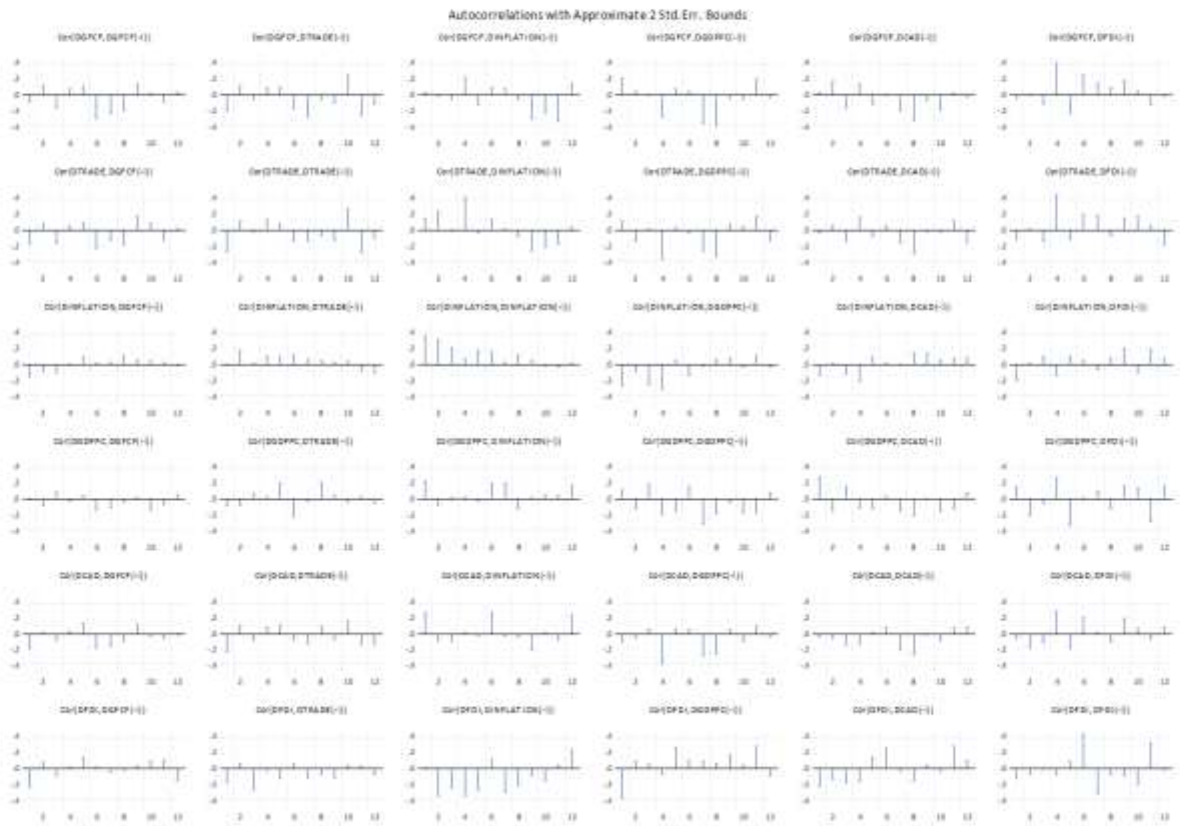

Figure 9: Correlogram

The above correlogram or Auto Correlation function (ACF) depicts that in general, there is no auto-correlation between the data over time.

CHAPTER VI

CONCLUSION AND STRUCTURAL REFORMS

A. Conclusion

The study provides an empirical analysis of the effects of the current account deficit on gross fixed capital formation in Lebanon over the period 1990 – 2021. Results observed from the study showed that there is no evidence of an effect of CAD on GFCF. However, the outcome showed a reverse causality whereby the results were statistically significant when studying the effect of the GFCF on the current account deficit. We can conclude that there is a causal relationship running from GFCF in Lebanon to the current account deficit. Back to the definition of the current account balance, expressed as the difference between national (public and private) savings and investments *(CA = savings – investments)*. Hence according to this identity and our findings, we can say that an increase in investments, increases the current account imbalances in Lebanon. The intuition behind the observed results can be explained as follows: if savings were insufficient to finance domestic investments, this creates a demand for capital inflows from abroad. In turn, these capital flows are recorded as a credit on the capital account but will be accompanied by a deficit on the current account. On the contrary, if a country has excess savings, then it will be able to lend to other countries and finance foreign investments. This is considered negative on the capital account but matches a current account surplus.[107]

[107] Pettinger, Tejvan. *"Current Account = Savings – Investment*". Economics Help. December 2017.

Thus, a current account deficit may reflect low national savings (fewer exports, more imports) or large investments. Therefore, it is tricky to judge whether deficits allow us to evaluate whether an economy is drowning or growing. If the deficit reflects a high rate of investments, this could imply that the economy is highly productive and expanding. Yet, if it reflects low savings due to imports outweighing exports, then this might indicate low productivity and competitiveness issues. This implies that in economic theory, to distinguish whether a deficit is good or bad, it depends on the factors behind it.[108] An increase in the current account deficit may be associated with an increase in investments in Lebanon, yet, this does not necessarily mean it is the main or sole reason behind it.

As a result, policies encouraging investment have a negative impact on the current account, but policies reducing public and private consumption have a positive effect since they boost national saving. Foreign capital inflows could contribute to new management skills and techniques, and technological advancements, which may enhance local investment and promote economic development. This may have favorable effects on domestic investment and savings. However, Griffin and Enos (1970) argued that an inefficient government and private sector can deteriorate local savings. It is also feasible that foreign capital inflows could replace domestic investment. Therefore, foreign capital inflows can either impair or boost national savings or domestic investment depending on government policies and economic agents' behavior.[109]

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[108] Ghosh, Atish and Ramakrishnan, Uma. "Current Account Deficits: Is There a Problem?". International Monetary Fund

[109] Yan, Ho-don and Yang, Cheng-lang. *"Foreign Capital Inflows and the Current Account Imbalance: Which Causality Direction?".* Feng Chia University. June 2008. p. 442

B. Structural Reforms and Policy Recommendations

Lebanon has been suffering from macro, fiscal, and economic crises. The roots of the crisis are captured in the failing private and public institutions, the collapse of the banking sector, the structural vulnerabilities that include poor infrastructure and a dysfunctional electricity system, and the inability of the government to deal with emerging crises. Accountability reforms are necessary to overturn sources of corruption in Lebanon. They aim to enhance efficiency in public financial management and provide better governance and judicial system. Transparency and accountability help restore the confidence of domestic and international bodies while maintaining and preserving the government's reputation. Nevertheless, a set of austerity measures and structural reforms are required to put the country on a sustainable recovery path and restore the confidence of the domestic and international communities.

1. Sovereign Debt Restructuring

Lebanon's public debt reached $101.6 billion in July 2022.[110] Inefficient spendings such as subsidies, large pensions, and declining revenues are the main causes of Lebanon's increasing primary balance. Efficiencies in public expenditure and tax collection must be implemented in order to achieve fiscal sustainability, as well as to free up funds for an effective social safety program.[111] One way to restructure the local currency debt proposed in the Lebanese Government Recovery Plan is through a rescheduling and debt-to-equity

[110] L'Orient-Le Jour. "Lebanese public debt hit $101.6 billion in late July." November 2022

[111] World Bank. Lebanon Economic Monitor: "The Deliberate Depression.". Fall 2020

swap.[112] Debt-to-Equity swap is a financial mechanism that facilitates the renegotiation of debt by allowing the debt holder to get an equity position in exchange for the cancellation of the debt. The reorganization of State assets could provide substantial recurring earnings for the State while offsetting debts between the central bank and the government. Asset post-restructuring revenues would be used to boost the economy. The government and the central bank can engage in a swap transaction to exchange T-bills for an equivalent portfolio of State assets in order to further lower the debt-to-GDP ratio. Also, a debt sustainability framework includes: reducing subsidies to Electricite Du Liban (EDL), unifying income tax code, adopting VAT and Customs reforms, and reforming subsidies policies.

2. Restructuring of the Monetary and Fiscal Policies

One key aspect of the crisis is the banking sector, which has been plagued by issues such as insolvency, high exposure to sovereign debt (government and Central Bank), and mismanagement due to corruption. Hence, given the economy's high reliability on the banking sector, it is imperative to restructure it in order to resolve the financial crisis. This implies that reorganization and recognition of the losses while protecting small depositors, in the banking sector are required to achieve solvency. The acknowledged losses could guarantee the recapitalization of systemically important banks, fair burden sharing, and the exit of insolvent non-systemic banks, which serve as a critical component in the financial sector restructuring strategy. A comparable restructure of the Central Bank's balance sheet will likely be necessary given the interdependence of the balance sheets of the government,

[112] LIBANK and Chikhani, Nicolas. "A Virtuous Solution to Lebanese Financial and Economic Crisis". June 2020

commercial banks, and the central bank.[113] In order to alleviate the uncertainty in the market transactions, the Central bank should also intervene to unify multiple exchange rates in the market, accompanied by comprehensive and formal capital controls. A good strategy to unify the exchange rate is to devaluate the official exchange rate that stands at LBP1,507, while the black-market exchange rate reached 1 US Dollar = 45,000 LBP in December 2022, and floating it within a certain range, rather than a standard fixed peg.

3. Restructuring and Reorganization of the Electricity Sector (EDL)

The electricity sector has been suffering from political imbalances, financial losses, and failing bureaucracies as well as poor administrative strategies. As mentioned above, to maintain an effective debt sustainability framework, subsidies to EDL should be reduced. In fact, annual transfers to EDL averaged 3.8% of GDP over the past 10 years, which amounts to 50% of the country's overall fiscal deficit. Notably, the Government transferred $2.2 billion to EDL in 2012, which is equivalent to 5.1% of GDP.[114] Also, EDL is financially suffering from high costs of production and low fixed-tariff in Lebanese pounds which makes it unfeasible to implement sustainable reforms. In 2018, the cost of supplying electricity was estimated at $6.1 billion. In 2020, EDL's cumulative deficit relative to the public debt reached $43 billion. Hence, an innovative plan is proposed to finance the restructuring of the electricity sector with the goal of providing the cheapest, cleanest, and most sustainable electricity supply. The project aims to provide solutions for generation, transmission, and

[113] World Bank. Lebanon Economic Monitor: "The Deliberate Depression.". Fall 2020

[114] World Bank. *"Lebanon Public Finance Review, Ponzi Finance?"*. July 2022, p. 88

distribution by raising a find with an estimated value of $2 billion. The proposal offers depositors, on a voluntary basis, the opportunity to own and fund the new power plants through an Initial Public Offering (IPO) on the Beirut Stock Exchange. In return, depositors will make returns, 1.5 times their initial investment in fresh dollars over the lifetime of the project (20 years).[115]

[115] Ayat, Carol. "*Bridging the Banking Crisis to Crowdfund Electricity Reform in Lebanon*". Issam Fares Institute for Public Policy and International Affairs. October 2021.

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