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The Impact of Dollarization on the Agricultural and Industrial Sectors in the Egyptian Economy Post the 2011 Revolution

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Abstract *This paper will shed light on the fluctuations that happened to the exchange rate in Egypt and from 2011 post the 25th of January revolution until 2022. The great dependency on the dollar led to high increase in prices and rise in the inflation rates. In addition, this paper will analyse the impact of dollarization on the various sectors in the Egyptian economy, namely the agricultural and industrial sectors and display the dependency of those sectors on the value of the Dollar. The findings showed that the restrictions on imports raised the prices of imported raw materials and soil fertilizers, which caused shortages and increased the prices of both agricultural and industrial products.*


Keywords: Dollarization; Exchange Rate; Inflation; Industry; agricultural Sector

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Introduction

Lots of developing countries have lost confidence in their local currencies due to many political and economic incidents. They find it much easier to depend on a more stable currency in pricing their commodities. That's why we always hear about dollarization and it became a widespread phenomenon. Dollarization is a kind of currency substitution that occurs when a country's institutions choose to use US dollars as a medium of exchange or a store of value instead of the domestic currency. The impact of dollarization on the economy has triggered an intense debate, with some saying that it will lead to a kind of financial stability, while others go for the probability of causing more income inequality. It is worth to note that dollarization occurs mostly in developing economies with a weak central monetary system or with an unstable political and economic environment (Estefez, 2022). In this paper, we are going to shed light on the impact of dollarization on the Egyptian economy, namely the agricultural and industrial sectors, post the 2011 revolution.

The Egyptian financial sector has been in chaos since the 2011 revolution, due to the political instability and economic downturns. The Egyptian pound also witnessed multiple devaluations against the US Dollar since 2011. Recently, it was devalued by more than 50% since March 2022 (Flynn, 2023). These series of devaluations had a significant impact on the Egyptian economy, especially with the increase in the cost of imports, that had a negative impact on the agricultural and industrial sectors. Also, with the high rates on inflation as a result, the consumers' purchasing power witnessed a reduction. A range of measures were taken by the Egyptian government and central bank to address the economic challenges facing the country and to stabilize the currency, including some economic reform programs and securing foreign aid and loans from international organizations (IMF, 2022).

On one hand, the Egyptian industrial sector had also experienced significant changes post 2011 and the multiple devaluations. The industrial sector comprises about 11% of the GDP in Egypt, and is also responsible for the employment of 28% of the total workforce. In addition, the industrial sector's investments amounted to 49 billion EGP in 2020/21, which represents about 6% of the total public investments. The Egyptian government put a huge effort into developing the industrial sector and increase its export proceeds. On the other hand, the agricultural sector contributes to 11.3% of the GDP in Egypt and 28% of the total work force, while 55% of the workforce in Upper Egypt mainly agriculture sector related (Zawya, 2022). Recently, Egypt was following an Agricultural enhancement scenario, aiming at increasing the share of agriculture in investment spending and increasing its productivity (Khorshid & Shaker, 2022).

In order to discuss the impact of dollarization on the Egyptian industrial and agricultural sectors in Egypt since 2011, the paper is divided into the following sections following the introduction: a literature review to showcase previous cases of dollarization in other countries, theoretical framework to discuss various theories. Moreover, the inflation, interest and the exchange rates of Egypt will be discussed, in addition to analysing the effect of dollarization on the agricultural and industrial sectors in Egypt. Moreover, Egypt' steps towards de dollarization will be discussed. Finally, the paper will be concluded.

Literature Review

The Dollarization Case of Lebanon

Lebanon had gone through many events and conflicts that affected badly the country's economy starting from the 1970s until the breakout of the civil war, which lasted until the 1980s and left it with a destroyed economy. The Lebanese currency (Lira) witnessed a large drop for decades; and the government policies were not able to prevent or decrease that sharp drop in the currency. The governments were very corrupted and went as far as stealing money from the central bank of Lebanon.

The governor of the central bank of Lebanon himself was accused in a money laundering case. Unsuccessful monetary and fiscal policies were implemented, so the country's problems were not solved. What made the situation even worse was the political instability initiated by many protests in 2019, the Covid-19 pandemic and the Beirut port explosion in 2020. As a result of these events, the GDP of Lebanon decreased from \$52 billion in 2019 to just \$21.8 billion in the year 2021, a contraction by about 58.1% and the GDP per capita fell by 37%. There was depreciation in the exchange rate, expected with an economy depending mainly on imports. The country faced many crises such as the energy crisis, industrial and agricultural losses due to the high dependence on dollar and the shortage in the foreign currency that led to many problems in the banking sector (Amer, 2022). As a result, the Lebanese lira reached a very low exchange rate, with 100 thousand liras for every one dollar. The government was obliged to replace the lira with the US dollar for about 80% of the commodities to be priced in dollars instead of the lira (Al Arabiya, 2023).

The Dollarization Case of Panama

Panama is a small country with a very low GDP of \$6.9 billion in the year 1998. Although there is a currency for Panama called balboa, the US dollar dominated the economy and it became the legal tender since the year 1904 due to political factors rather than economic ones. Very small number

of commodities were sold and few transactions done by Panama's currency. The large dependence on the dollar system did not bring too much stability for the macroeconomic indicators in Panama, as the inflation rate was volatile and not stable. There was a high volatility in the GDP growth rates, which was the worst among the Latin America countries. Many bad events were faced by Panama and a large drop in the value of its GDP, as the dollarization makes the economy very vulnerable and weak in facing any external shocks. Also, dollarization had a negative impact on the industrial sector in Panama, as it was representing only 3.5% of the total GDP, while the main sector sharing in the GDP was the service sector (Goldfajn & Olivares, 2022).

Dollarization case of El Salvador

Many problems were faced by El Salvador, that led the country to follow a dollarization policy. The main objectives of the government were: increasing the financial integration of the country with the world economies, decreasing the very high inflation rates and lowering the domestic interest rates volatility. Dollarization was implemented at the start of the 2000s by the government, and it succeeded in some objectives but at a very high cost. El Salvador after following a dollarization policy became more developed and became more integrated with other countries, as the trade relations improved especially with the rest of the Caribbean regions. Yet, the trade relations with the USA were not that good. Also, the economic growth of El Salvador did not change a lot from the rates before the dollarization was implemented. In addition, El Salvador was badly affected by the financial crisis that happened in the year 2008 more than other regional economies (Canuto, 2022).

Theoretical Framework

Theory of Dollarization

The theory of dollarization suggests that dollarization can both be beneficial or harmful to an economy. On one side, dollarization can have a positive effect on businesses and investors through the creation of a more stable business environment as it makes the currency less vulnerable to swings. In addition, dollarization facilitates trade and investments through the reduction of currency conversion risks and costs. On the other side, dollarization can make the monetary policy implemented less effective as the central bank loses power over the money supply and interest rates when conducting most of the economic transactions in a foreign currency. The possible outcomes are increased economic uncertainty and decreased financial mobility. Furthermore, the theory also asserts that dollarization may cause economic pressures from abroad and countries may lose some of their economic independence (Schuler, 2005).

Theory of Exchange Rate Determination

According to this theory, the value of one currency in relation to another determines the exchange rate between the two countries. At this exchange rate, the two currencies' purchasing powers will be equalized. Thus, short-term variations in the value of one currency with respect to another currency are determined by market forces of demand and supply. Actually, exchange rates are set in the long run by the relative values of the two currencies, as indicated by their respective purchasing powers over goods and services. Also, the equilibrium exchange rate is the rate at which the two currencies have the same purchasing power. This leads us to identify what we call purchasing power parity. In that respect, the external value of a currency is said to be determined ultimately by the purchasing power of that currency in its domestic market in relation to another currency (Stockman, 1980).

The Effect of Exchange Rate on Sectoral Output

The effects of the exchange rate on some sectors may be disputed by negative effects on others. Different industries have varying export and import ratios, product differentiation, demand and supply price elasticities, and exposure to variations in the exchange rate. Each industry will feel the consequences in a different way. The impact of the exchange rate differs from one sector to another depending on magnitude and timing. Some industries will be affected immediately, while others will be affected later. Exchange rate fluctuations will have less of an impact on industries that rely heavily on imported inputs due to variables such as product differentiation and reduced competition. On the other hand, a sector's response is more magnified when its export share is higher, when its share of imported competitive goods is higher, and when its price elasticity of demand is higher (Hahn, 2007).

The Development of Exchange Rate in Egypt

Political and economic turmoil are the main reasons of the exchange rate fluctuations occurring in the country since the 2011 revolution. In addition to politics and social unrest, Egypt's economic policies significantly affected the exchange rate. In 2016, the Egyptian central bank announced the implementation of the floating exchange rate system. When that decision was made, the exchange rate dropped by 13% overnight against the US Dollar. By January 2017, the exchange rate fell to 19.56 EGP/US Dollar from 8 EGP/US Dollar in November 2016. In the following years, the exchange rate stayed between 16 and 18 EGP/US Dollar.

The floating exchange rate system had a significant effect on the economy, leading to a double dilemma of inflation and depreciation that occurred overnight. However, after several years trying to adapt to the floating system, the value of the Egyptian Pound showed deterioration. The

government increased interest rates to curb the rate of inflation that occurred as a result of the floating system (Mao, 2022). In addition, the IMF encouraged the Egyptian government to implement more flexible exchange rate system in order to increase the reserves and prevent imbalances. This was when the IMF approved a 46 months \$3 billion economic reform program for Egypt (Zawya, 2023).

Exchange rates in Egypt from 2013 till 2023

According to the agreement between the Egyptian government and the International Monetary Fund in 2016, the decision was made to devalue the Egyptian pound. Overnight, the price of one U.S. dollar in Egyptian pound went from 8 EGP/US \$ to 13 EGP/US \$. The prices of all goods and services witnessed a huge increase. As a result, the low income groups were badly affected (El Baradei, L. 2019).

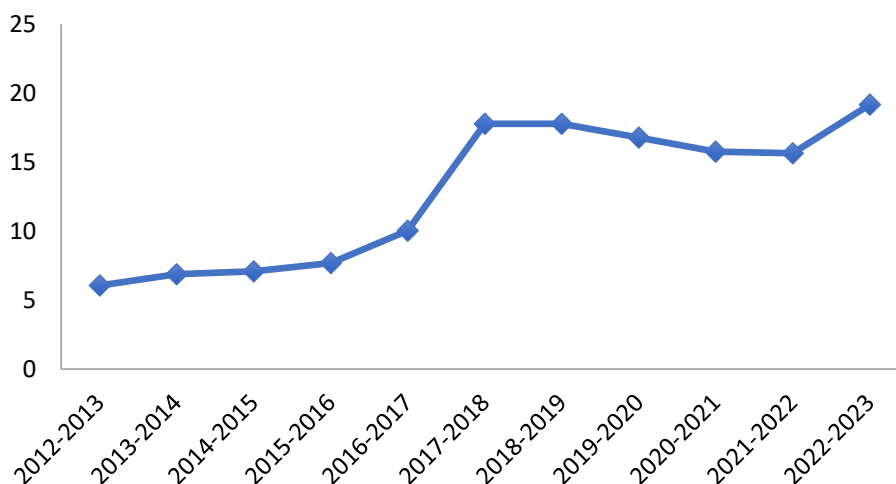


Figure 1: Egyptian pound exchange rate against the US dollar.

Source: World Bank 2023

Egypt's total foreign debt went up by 14% in 2020. The main reason was because the government sold more Eurobonds and the IMF bought \$2.5 billion worth of Egyptian debt. Egypt tried to increase the diversity of foreign direct investment, through for example a deal for a sixteen billion-dollar Saudi-Egypt investment program in a wide range of industries. Yet, the inflows to Egypt dropped by 35% to \$5.9 billion in 2020. Most of Egypt's foreign funding is still coming from the oil and gas business.

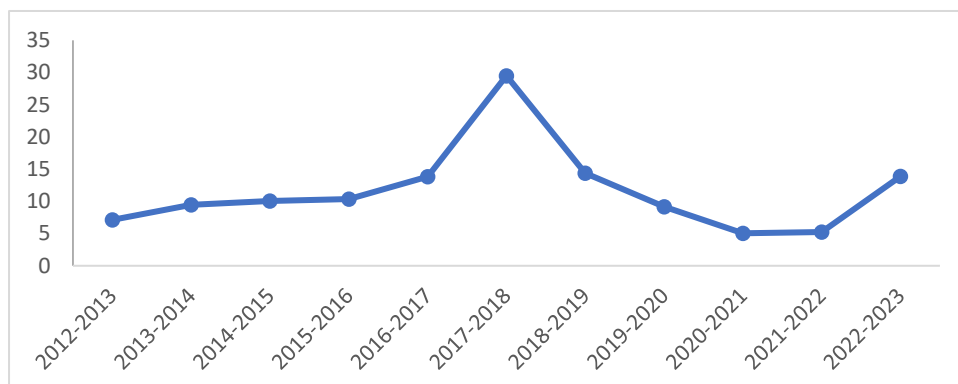


Figure 2: Rate of Inflation in Egypt from 2012-2023 Source: World bank 2023

Egypt's total foreign debt increased from \$69 billion in 2017 to \$100 billion in 2018, \$131 billion in 2020, reaching \$138 billion by the end of 2021. Most foreign loans were long-term debt that increased from \$80 billion in 2018 to \$90 billion in 2019 to \$99 billion in 2020, making up 80%, 79%, and 75%, respectively, of the country's total external debt. In terms of short-term debt, the country's share of all foreign debt has gone down from 13% in 2017 to 10% in 2019 and 9% in 2020 from the country's total external debt. The value of the Egyptian pound was going down because of the dual deficit (Budget and trade deficit) that Egypt had always suffered from for long decades now. In order to finance these deficits, the government borrowed from abroad which led to further increase in the budget deficit. As a result, the Egyptian external debt reached about \$155 billion, and the service of these debts consumes a very high percent of the government budget every year, and this led to a decrease in the government spending (Bashar, Ghaly, 2023).

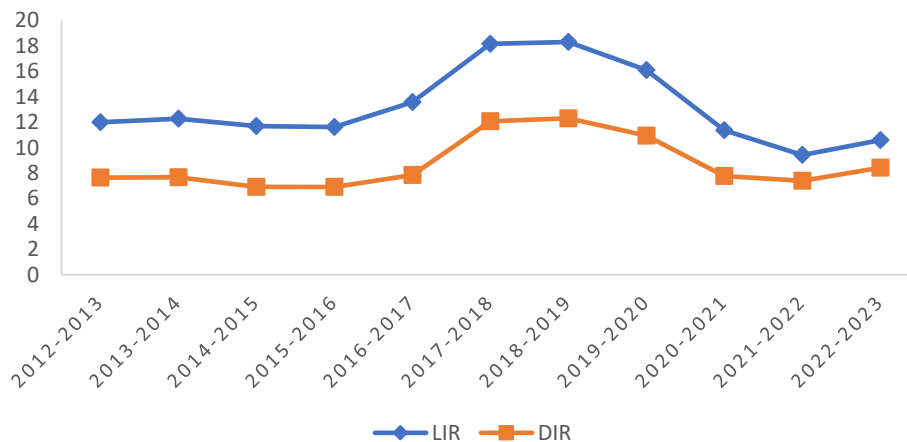


Figure 3: Egypt Interest Rates 2012-2023. Source: World Bank 2023

Egypt witnessed very hard and severe situation that affected negatively its economy to a big extent. Starting from the year 2011 and with the 25th of January revolution leading to the step down of President Hosni Mubarak from power, the country went through big chaos. There was a great instability in the country and many investments have fled and withdrew from the Egyptian economy, the matter that led to huge losses incurred by the Egyptian economy. The prices of food and energy increased by 7% until the year 2012. The slight increase in interest rates was used as a tool to tackle the rise in inflation rates (Reuters, 2012). By the year 2013 and with the 30th of June revolution and due to the instability associated with it, the inflation continued to increase until 2016 as it reached 13%. The Egyptian economy suffered from many problems such as the huge deficit in the government budget and the decrease in the foreign reserves, which led to a shortage in the foreign currency that worsened the situation even more. In March 2016 the government devalued the Egyptian pound and it reached 8.85 per US dollar. Later on, on the 3rd of November 2016 the government decided to adopt a floating exchange rate system and this led to a decrease in the value of the Egyptian pound until it reached 13.89 per US dollar. In addition, the currency continued its depreciation until it reached 19.56 per US dollar (Khan and Miller, 2017). Then it reached 18 per dollar before it started to decrease again until it became stable at 15 per US dollar from 2019 until March 2022.

The drop in the value of the Egyptian pound resulted in an increase in the inflation rate that reached almost 31% after the floatation that was implemented in November 2016 (as shown in figure 2). As a result, the central

bank of Egypt increased its lending and deposit interest rates by 2%. Also, they were further increased by about 5% throughout the year 2017 as shown in figure 3. The main objective of the central bank was to decrease the inflation rate, so they highly increased the interest rates by that much (Khan and Miller, 2017). However, a decline in the inflation rate was witnessed in 2018, so the government started to decrease the interest rates in order to boost the investments and encourage the private sector.

On the other hand, the Russian Ukrainian war started in 24th of February 2022 and it was a cause for major economic problems witnessed by Egypt's Economy. The war in Ukraine raised the inflation rate on an international level to a very high level. In Egypt, the inflation rate started to increase since March 2022 because of the series of devaluations that happened to the Egyptian pound. The last devaluation was in March 2023 and the Egyptian pound value became 30 per US dollar. This huge increase in the US dollar value against the Egyptian pound along with the shortage of the foreign currency led to the high rates in inflation. The annual inflation rate reached 32% in March 2023. As a result, the interest rates started to increase, with the lending and deposit interest rates reaching 19.25% and 18.25% respectively (Magdy, 2023).

The impact of dollarization on the Economic sectors in Egypt

The impact of dollarization on the industrial sector

The dollarization effect was very costly for the Egyptian economy. Especially when the Russian-Ukrainian war started, the energy prices increased, and the prices of all goods increased after that. The USA increased its interest rates to tackle its high inflation rate. As a result, many investors especially those who were investing in bonds and treasury bills withdrew their money from most of the developing economies. In Egypt the amount of hot money that flew out from the Egyptian economy was estimated to be \$22 billion at the beginning of the war in March 2022 and another \$3 billion in the second half of the year 2022. Egypt is not considered a manufactured or industrial country. Most of Egypt's manufactured products are imported from abroad, this is in addition to the huge debt burden that the economy is suffering from. The withdrawals from the Egyptian economy caused a dollar shortage, which derived the government to put restrictions on imports. This decision from the government created a shortage in the Egyptian market which led to a shot in prices, as the manufacturers were unable to import the raw materials from abroad. In addition, dollarization increased the cost of imported raw materials used in the domestic manufacturing processes, which had a negative impact on the profit margins of these manufacturers. So the manufacturers increased the prices of their products by more than 15% as a result of the high costs and the currency shortages (Hendawi, 2022).

The impact of dollarization on the agriculture Sector

The shortage in the foreign currency has increased the value of the imports of necessary food products such as wheat, that Egypt was importing thousands of tonnes mainly from Russia and Ukraine. More than 700,000 tonnes of wheat were not released from the customs due to the shortage in the foreign currency, that led to the huge increase in the prices of necessary food commodities. In addition, the imports of corn, poultry and soybeans have also been negatively affected, and that led to an increase in the prices of chicken. In addition, the costs of the imported agricultural inputs such as fertilizers and machinery increased significantly, which increased the burden of the farmers and potentially decreased their profitability (El Safety, 2022).

Egypt' steps towards de dollarization

The Egyptian government took many steps to solve the dollar crisis and solve the problem of the foreign currency shortage. One action taken is to decrease the dependence on the US dollars in Egypt financial exchanges especially with China and Russia, since the Russian central bank have valued the Egyptian pound against the Russian rubbles on real ground (Al-aees. 2023). Also, Egypt joined the BRICS⁵ development bank, which is one of the most important economic blocs where the country members are seeking to trade among each other's with their local currencies instead of the US dollar. The bloc is intending to create a unified currency such as the Euro to be used for their trade exchanges (Egypt independent, 2023). Moreover, the Egyptian government went for the diversification of the country's debts, as the government issued the panda bonds, which is denominated in Chinese yuan. The Egyptian government made this move in order to get rid of the domination of the US dollars in the county's debts (Reuters, 2022).

Conclusion

The Egyptian government took many decisions that led to the devaluation of the Egyptian pound against the US dollar since March 2016 until 2023. Due to the depreciation of the Egyptian pound and being not an industrial or export-oriented country, a severe dollar shortage occurred, and high rates of inflation rates was the result. To fight inflation, the government increased both lending and deposit interest rates, which badly affected both the domestic and foreign direct investment in Egypt. In addition, the effects of dollarization on the agricultural and industrial sectors are complex and

⁵ BRICS is a group of the world economies of Brazil, Russia, India, China and South Africa formed by the 2010 addition of South Africa to what was previously called BRIC.

multifaceted. Factors like local policy decisions, global market trends and overall economic situation play significant roles in shaping these sectors since 2011 revolution. As far as the current situation is concerned, the restrictions on imports raised the prices of imported raw materials and soil fertilizers, which caused shortages and increased the prices of both agricultural and industrial products. To deal with this problem, Egypt took steps to decrease its dependence on the dollar such as joining the BRICS, dealing by other currencies and diversifying its debts.

In order to increase foreign currency and the revenue streams from the foreign currency, the country must implement serious structure changes and policies. First, private sector investments should be encouraged especially SMEs. Second, the custom duties, especially on imported raw materials needed for both agriculture and industry should be reduced to promote economic growth and increase exports. Next, the government must improve the business indicators and transparency to attract more FDI, rather than depending on the investment in the hot money to avoid similar catastrophes in the future. Finally, Egypt has to implement policies to improve the stability of the Egyptian currency to decrease the risk associated with currency speculation and therefore, improving the investment level.

References

- Al Arabiya. (2023). Lebanon leans on US dollar to cope as currency, Economy Tank. Al Arabiya English. Retrieved from: <https://english.alarabiya.net/business/economy/2023/03/06/Lebanonleans-on-US-dollar-to-cope-as-currency-economy-tank>
- Al-aees, S. (2023, January 22). Trading EGP on Moscow Exchange will have positive impact on Egyptian economy: Official. Daily News. Retrieved May 19, 2023, from <https://www.dailynewsegypt.com/2023/01/22/trading-egp-on-moscow-exchange-will-have-positive-impact-on-egyptian-economy-official/>
- Amer, A. (2022). Should the Lebanese economy be fully dollarized? lessons from Panama and Liberia. Management Studies and Economic Systems.
- Boshra Ghaly, S. (2023). External debt in time of inflation in Egypt: a vector error correction model. *المجلة العلمية للدراسات والبحوث المالية والتجارية*, 4(1), 661-701. retrieved from
- Canuto, O. (2022, April 29). Dollarization of Argentina: Revival of A Zombie Idea. Seeking Alpha. Retrieved May 13, 2023, from <https://seekingalpha.com/article/4504930-dollarization-of-argentina-revival-of-zombie-idea>

- Egypt independent. (2023, March 30). Egypt Joins New Bank of BRICS Bloc. Retrieved May 19, 2023, from <https://egyptindependent.com/egypt-joins-new-bank-of-brics-bloc/>
- El Baradei, L. (2019). Egypt's currency devaluation & impact on the most vulnerable. *International Relations and Diplomacy*, 7(7), 303-316. Retrieved from: <http://www.davidpublisher.com/Public/uploads/Contribute/5d3fa4c029c75.pdf>
- El Safty, S. (2022, October 4). Egypt's private sector wheat imports stall due to dollar shortage.
- Erasmus, L., & Menkulasi, J. (2009). Dedollarization in Liberia-lessons from cross-country experience. IMF.
- Estevez, E. (2022). Dollarization definition, impact, example. Investopedia. Retrieved from: <https://www.investopedia.com/terms/d/dollarization.asp>
- Flynn, A. (2023). Devaluation: What the future holds. The American University in Cairo. Retrieved from <https://www.aucegypt.edu/news/devaluation-what-future-holds#:~:text=The%20pound%20has%20devalued%20by,inflation%20rates%20in%20five%20years>.
- Goldfajn, I., Olivares, G., Frankel, J., & Milesi-Ferretti, G. M. (2022). Full dollarization: the case of Panama [with Comments]. *Economía*, 1(2), 101-155.
- Hahn, E. (2007). The impact of exchange rate shocks on sectoral activity and prices in the Euro area. Retrieved from https://www.researchgate.net/publication/4888214_The_impact_of_exchange_rate_shocks_on_sectoral_activity_and_prices_in_the_Euro_area
- Hendawi, H. (2022, September 3). Egypt's retail and industry sectors feel the heat from dollar shortage. The National News. Retrieved May 19, 2023, from <https://www.thenationalnews.com/mena/egypt/2022/09/03/egypt-s-retail-and-industry-sectors-feel-the-heat-from-dollar-shortage/>
- IMF. (2022). Frequently asked questions on Egypt and the IMF. IMF. Retrieved from <https://www.imf.org/en/Countries/EGY/Egypt-qandas>
- Khan, M., & Miller, E. (2017, June 19). Why Inflation is So High in Egypt. Atlantic Council. Retrieved May 19, 2023, from <https://www.atlanticcouncil.org/blogs/menasource/why-inflation-is-so-high-in-egypt/>

- Khorshid, Moataz & Victor, Shaker. (2022, July). Towards a sustainable agriculture strategy for Egypt. "Results from An Agriculture Economy Enhancement Model." *The International Journal of Public Policies in Egypt*, 1(3), 97-117.
- Magdy, S. (2023, March 1). Egypt struggles with troubled economy due to Ukraine war. PBS News Hour. Retrieved May 19, 2023, from <https://www.pbs.org/newshour/world/egypt-struggles-with-troubled-economy-due-to-ukraine-war>
- Mao, W. (2022, March). Analysis on Changes in Exchange Rate of Egypt over Past Decades. In 2022 7th International Conference on Financial Innovation and Economic Development (ICFIED 2022) (pp. 2376-2379). Atlantis Press. Retrieved from <https://www.atlantispress.com/proceedings/icfied-22/125971785>
- Reuters. (2012, October 10). Slow Egypt Economy Keeps Sept Inflation Down. Retrieved May 19, 2023, from <https://www.reuters.com/article/ozabs-egypt-inflation-20121010-idAFJOE89901320121010>
- Reuters. (2022, December 4). Egypt Aims to Issue First Panda Bonds by End of Current Fiscal Year. Retrieved May 19, 2023, from <https://www.reuters.com/markets/rates-bonds/egypt-aims-issue-first-panda-bonds-by-end-current-fiscal-year-official-2022-12-04/#:~:text=Panda%20bonds%20are%20bonds%20denominated,to%20be%20at%2024500%20million.>
- Stockman, A. C. (1980). A theory of exchange rate determination. *Journal of political Economy*, 88(4), 673-698. Retrieved from <https://www.journals.uchicago.edu/doi/abs/10.1086/260897>
- Trading economics: 20 million indicators from 196 countries. *TRADING ECONOMICS | 20 million INDICATORS FROM 196 COUNTRIES*. (2023). Retrieved March 19, 2023, from <https://tradingeconomics.com/>
- Vinueza, S. C. (2022). Impact of Dollarization Ecuador's Economic Performance. Saint Peter's University
- Zawya . (2022). Egypt's industrial sector contributes 11.7% of GDP. ZAWYA. Retrieved from <https://www.zawya.com/en/economy/north-africa/egypts-industrial-sector-contributes-117-of-gdp-segzdy3f>
- Zawya . (2023). Egypt walks into permanent flexible exchange rate. ZAWYA. Retrieved from <https://www.zawya.com/en/economy/north-africa/egypt-walks-into-permanent-flexible-exchange-rate-npua2vi4>