

The Impact of Exchange Rate Liberalization on The Performance of Egyptian Hotel Industry: An Analytical Study

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Abstract:

Hotel industry is affected by economic variables, whether local or international. The liberalization of the exchange rate is considered one of the most important economic variables that occurred in Egypt in the year of 2016. Therefore, this research aims to study the impact of exchange rate liberalization on the performance of hotel industry in Egypt. The policy of liberalizing the exchange rate has led to an increase in the value of the US dollar against the Egyptian pound. In addition, total tourist revenues have increased and total number of tourists, hotel occupancy rate and total hotel nights has decreased. Moreover, t-test showed that there are no statistically significant differences in the indicators of the total number of tourists, total tourist revenues, total hotel nights and hotel occupancy rate, whether before or after the exchange rate liberalization policy. Using the binary logistic regression test, the indicators of the average exchange rate, total number of tourists, total hotel nights, and hotel occupancy rate are not considered a predictor of an increase in the rate of tourism revenues in Egypt. Accordingly, this research provides an integrated statistical analysis of the impact of the exchange rate liberalization on hotel industry, and thus, this research helps decision makers in official tourism establishments and hotel managers in making decisions, setting policies or scenarios, and building strategic plans that support the economic value of the hotel industry in Egypt.

Keywords: Exchange Rate Liberalization, Number of Tourists, Tourism Revenues, Hotel Occupancy Rate, Total Hotel Nights.

1. Introduction:

The hospitality industry is one of the oldest industries in the world that touches many aspects of human life. It also has a clear impact on the economic development of a country (Grigolon *et al.*, 2014). The hospitality industry is one of the sources of income (UNWTO, 2016). The tourism industry is an important part of the economy and is linked to regional socio-economic growth (Weston *et al.*, 2019). Accordingly, the development of the tourism industry (or the hospitality industry), means

the development of a source of income in foreign currency, which ultimately leads to the improvement of the prevailing economic conditions (Aalen *et al.*, 2019). The hotel industry as an economic activity is affected by economic policies, and the liberalization of the exchange rate is one of the important economic policies in the economy of any country (Datta *et al.*, 2021). During the past two decades, many developing countries have formally abandoned the fixed exchange rate policy and adopted a floating currency policy (Alstadheim *et al.*, 2021).

The Central Bank of Egypt liberalized the exchange rate of the Egyptian pound through the mechanism of supply and demand for foreign currencies on November 3, 2016 (Central Bank of Egypt, 2016). This policy had an impact on tourism investment in general and on the economic performance of hotels in particular (Soliman & Shedeed, 2018). Therefore, the purpose of this research is to study the impact of the exchange rate liberalization policy on the performance of the hotel industry in Egypt.

2. Literature Review:

On November 3, 2016, the Central Bank of Egypt decided to liberalize the exchange rate of the Egyptian pound, leaving its value to be determined through the mechanism of supply and demand for foreign currencies (CBE, 2016). Accordingly, the change that occurs in the exchange rates has a direct impact on the future change in the prices of goods and services. As a result of the increase in the prices of goods and services, hotels have raised their prices to maintain a profit margin by increasing room rates, which in turn leads to increased costs of accommodation and travel (El-Gazar, 2018). The fluctuations in exchange rates are an influential factor in tourist demand. Thus, the exchange rate variance and the weakness of the economy are among the main factors affecting the hotel industry (Ibrahim & Bashir, 2021).

The depreciation of the Egyptian pound against the US dollar affected the level of prices of services and tourist goods and the level of global demand for Egyptian tourism. Consequently, the Egyptian tourist destination has become cheaper compared to other tourist destinations (Anter & El-Nagy, 2018; El-Sherbiny, 2018). On the other hand, the depreciation of the Egyptian pound led to an increase in the cost of domestic tourism, which led to a decrease in domestic tourism flows (Soliman & Shedeed, 2018). Gourinchas (2021) stated that incoming tourism becomes less expensive when the value of the local currency decreases in international countries, which leads to an increase in foreign tourism flows to this country. Finally, currency fluctuations and the

prevailing economic situation are considered among the most important variables that affect the hotel industry.

In more detail, the liberalization of the exchange rate has an impact on the performance of the hotel industry, especially on the level of occupancy rate and spending rate due to the depreciation of the Egyptian pound and the increase in the prices of tourism goods and products (El-Bagouri, 2016). However, the impact of exchange rate liberalization is very low on hotel occupancy rates and tourist spending, because hotel services are in dollars. Thus, increasing the value of revenues and increasing the cost of products and raw materials (Ibrahim & Bashir, 2021).

The liberalization of the exchange rate is likely to affect tourism performance indicators, including the length of stay of tourists, which is one of the most important factors in tourism spending (Allen *et al.*, 2014), as well as the rate of tourism demand, which is affected by exchange rate fluctuations (Chang & Lee, 2017). The number of days a tourist spends at a tourist destination is an important factor in determining the economic impact of the tourism industry or hotel industry (Nicolau *et al.*, 2018). Despite the significant increase in the number of tourist nights in Egypt, the fluctuations in the exchange rate of the Egyptian pound led to a decline in the performance level of hotel activity, such as the average length of stay for tourists (Anter & El-Nagy, 2018). The Egyptian tourist destination has become cheaper due to the depreciation of the Egyptian pound against the US dollar, which has led to an increase in the international tourism movement (Anter & El-Nagy, 2018).

Economic variables affect the individual purchasing decisions of tourists (Andari *et al.*, 2019). The price is a strong indicator of the level of customer spending and has an inverse relationship to the stability of demand. When the exchange rate decreases, the demand of tourists for tourism services and goods increases (Aditi, 2019; Ortega & Osbat, 2020). The level of customer spending is a tool for economic growth and a catalyst for tourism expansion (Park *et al.*, 2020). Finally, the price of foreign currency has a significant impact on the rate of tourist spending in any tourist destination (Hou & Wu, 2021).

The exchange rate shows the country's ability to compete in global markets (Irongo, 2015). It also determines the value of one currency against another (Alstadheim *et al.*, 2021). The exchange rate is defined as the value of one currency for conversion to another, and therefore it is an important method for settling international payments and the key that determines the relationship between domestic and international prices

(Datta *et al.*, 2021). Exchange rates are affected by the interaction of supply and demand for foreign currencies in the exchange market between banks, the stock exchange, investors and speculators (Alstadheim *et al.*, 2021).

The foreign currency is used as the base currency in the exchange rate in most countries, and this is economically known as the direct exchange rate (Narayan *et al.*, 2020). Accordingly, the cost of one unit of foreign currency will be determined in units of local currency, for example, if the local currency is EGP (direct), then one US dollar equals 15.8794 Egyptian pounds and indirect one Egyptian pound equals 0.063 US dollars (Bank Egyptian Central Bank, 2020). The exchange rate is an important major component that has an unlimited impact on achieving the internal and external competitiveness of any country (Mollel, 2020). Policy makers are more interested in the behavior of real exchange rates when evaluating the overall currency rankings (Ortega & Osbat, 2020).

Undoubtedly, a stable local currency enhances confidence in any economy (Ghosh *et al.*, 2015), especially when foreigners invest money within the country (Ezzahid & Maouhoub, 2020). On the other hand, currency exchange rate fluctuations have economic costs that affect the stability of the level Prices and the level of general economic stability, as the rise in the floating exchange rate reduces the competitiveness of markets that depend on exports and negatively affects the local stock market and affects the import-based economy (Hoang & Minh, 2020). Moreover, the exchange rate variance has an impact on the economy of any country. Lowering the exchange rate (the dollar) helps to increase job opportunities, family savings, and increase the state's income by attracting investors. Thus, the appreciation of the local currency contributes to the increase in investment gains. On the other hand, the depreciation of the local currency leads to investment losses (Yu, 2021).

The exchange rate mechanisms in Egypt have diversified over several years. The International Monetary Fund has described that the exchange system used in Egypt during the years (2003: 2010) is a floating system that is managed without pre-determined (IMF 2006). As a result of the political instability in the period from 2011 to 2015, this led to a sharp slowdown in economic growth, widening of the public budget deficit, a permanent deficit in the balance of operations and current transfers, the continuous depreciation of the Egyptian pound and the gap in the volume of production or the import of goods or fuel, In addition to monopolistic regulation of markets, especially in food commodities, and high inflation rates (Abdelgany, 2020). To ensure exit from these shocks, the Central Bank demanded the formation of a specialized committee called the

“Price Follow-up Council” in 2012 (El-Mashat, 2012; Central Bank of Egypt, 2013). As for the Egyptian monetary policy during the period from 2016 to 2020, the Central Bank of Egypt announced on November 3, 2016 the liberalization of the dollar exchange rate through the demand and supply mechanisms (IMF 2020 & Abdelgany, 2020). This policy led to the devaluation of the Egyptian pound and the jump in the exchange rate of the US dollar, which caused an increase in the prices of goods and products. The exchange rate of the US dollar increased from 8,857 pounds in 2016 to 15,684 pounds by the end of the 2019/2020 fiscal year (Central Bank of Egypt, 2020).

The policy of liberalizing the US dollar exchange rate has different effects in Egypt. It is expected to increase the international tourism movement and attract foreign tourism investments to Egypt significantly (El-Bagouri, 2016 & Abdelgany, 2020). The growth in the exchange rate and the depreciation of the national currency against foreign currencies affects the balance of payments for tourism. As the value of the national currency depreciates, incoming tourism becomes less expensive, and thus increases tourist flows (Lamsso & Masoomzadeh, 2017). More specifically, when the actual exchange rates fall, the value of the local currency increases, local items become more expensive in foreign markets, and the demand for them decreases. Accordingly, the value of exports decreases, and the value of imports increases (El-Badawy, 2017). In order to determine the impact of fluctuations in the exchange rate of the pound on the economy, it was found that the value of the pound has been inflated, which has led to a negative impact on the trade balance and economic growth, and a positive impact on the Egyptian Stock Exchange (El-Sherbiny, 2018). It is expected that the floating pound will have good effects on the stability of the exchange rate, increase exports and increase the number of tourists, thus achieving a positive impact on the Egyptian industrial market (El-Gazar, 2018; Corbo & Di Casola, 2020). Finally, fluctuations in the exchange rate and the state of the economy are among the most important factors affecting the hotel industry (Elmoghany, 2021).

Opinions differed about the impact of the policy of liberalizing the exchange rate of the dollar against the Egyptian pound on the Egyptian economy and the tourism and hotel sector. Egypt's exchange rate policy has lowered the cost of living for international tourists who pay in dollars for services. On the other hand, the cost of living for Egyptian tourists who pay in Egyptian pounds has increased (Anter & El-Nagy, 2018). At the same time, reforming the dollar exchange rate is in the interest of the tourism and hospitality industry, as it improves the competitiveness of the tourism industry, which leads to an increase in the purchasing power of

tourists due to the low price (El-Sherbiny, 2018). In addition, the depreciation of the Egyptian pound has had a positive impact on the tourism industry, including increasing hotel reservation rates, restoring confidence in the tourism and hotel investment climate in Egypt, increasing the number of tourists, and reviving tourist shopping in Egypt (El-Gazar, 2018), and from another perspective The rise in the value of the dollar will have a small impact on the rates of tourism spending and hotel occupancy, because the tourist pays in dollars for hotel services (Soliman & Shedeed, 2018). On the other hand, the rise in the value of the dollar against the Egyptian pound led to an increase in the prices of services and tourist goods in tourist and hotel establishments (Ibrahim & Bashir, 2021).

Because of the liberalization of the exchange rate, the cost of production and services increased due to the increase in the prices of imported goods. This, in turn, leads to the imposition of new taxes and an increase in the burden on investment in Egypt (Abul-Oyoun, 2003). The decision to liberalize the exchange rate may not lead to an increase in foreign currencies due to individual desire, and the increase in the value of the country's currency will make international tourism more expensive and thus lead to a decrease in inbound tourism flows (El-Bagouri, 2016). Because of the relatively low number of tourists, a number of hotels and resorts were temporarily closed, and some stopped permanently. Also, the slowdown in the tourism movement has resulted in some hotels restructuring their departments, whether by merging or closing, and lying off workers (El-Badawy, 2017).

The liberalization of the exchange rate is not always appropriate for a variety of reasons, the most important of which are stagnation, the slowing ability of the economy to create jobs, and the lack of convergence between supply and demand for currencies (El-Badawy, 2017). In addition, the liberalization of the exchange rate led to a decline in international reserves and a decline in the rate of their coverage of imports, which resulted in a 15% decrease in exports and an increase in imports by 15% in the past two years (Soliman & Shedeed, 2018). According to statistics issued by the Central Agency for Public Mobilization and Statistics and the Central Bank of Egypt between 2016 and 2019, the average spending of tourists for one night increased to \$86.0 during the 2016/2017 fiscal year from \$72.8 compared to the previous fiscal year, which showed an increase in the average spending of tourists in Tonight (Central Agency for Public Mobilization and Statistics, 2018). By analyzing several exchange rate regimes, it was found that the stricter the exchange rate regime, the greater the positive impact on the tourism industry (Rodriguez *et al.*, 2018). With the increase

of negative effects, the trade balance deficit widened with the contraction of tourism income, which led to a 50% decrease in the surplus of services balance (World Bank, 2020).

When the exchange rate falls, the demand of tourists for services increase (Leberkhout, 2007). Exchange rate fluctuations lead to risks to tourist destinations, which makes tourists reluctant to visit or cancel their trips to tourist destinations (Agiomirgianakis *et al.*, 2014). Fluctuations in the exchange rate and slow economic development mainly affect tourism demand (Chang & Lee, 2017). Despite the significant increase in the number of tourist nights in Egypt, fluctuations in the exchange rate of the Egyptian pound led to a decline in some tourist services and facilities (Anter & Al-Najy, 2018). The exchange rate plays a crucial role in linking tourism prices and expenditures (Gavurova *et al.*, 2020). The exchange rate has a significant impact on the rate of tourism demand and spending (Muryani *et al.*, 2021).

3. Methodology:

This research aims to study the impact of exchange rate liberalization on the performance of the hotel industry in Egypt. Therefore, the descriptive approach is appropriate for this research. Since the policy of liberalizing the exchange rate took place during 2016, so the years are divided into two groups, the first group includes the years from 2012 to 2015 and the second group includes the years from 2017 to 2020, and the comparison between the two groups is done to see if there are significant differences between them regarding the total number of tourists and the total Tourism revenues, total hotel nights and hotel occupancy rates. By comparing the two groups, it is possible to know the level of impact of the exchange rate liberalization policy on the performance of the hotel industry in Egypt. This research has the following null hypotheses:

1. There is no statistical difference between the groups of before exchange rate liberalization and after exchange rate liberalization with regard to the average of US dollar exchange rate.
2. There is no statistical difference between the groups of before exchange rate liberalization and after exchange rate liberalization with regard to the average of hotel nights.
3. There is no statistical difference between the groups of before exchange rate liberalization and after exchange rate liberalization with regard to the average of hotel occupancy rate.
4. There is no statistical difference between the groups of before exchange rate liberalization and after exchange rate liberalization with regard to the average of total number of tourists.

5. There is no statistical difference between the groups of before exchange rate liberalization and after exchange rate liberalization with regard to the average of total tourist revenues.
6. The average of US dollar exchange rate is a significant predictor for increasing the total tourist revenues.
7. The average of hotel nights is a significant predictor for increasing the total tourist revenues.
8. The average of hotel occupancy rate is a significant predictor for increasing the total tourist revenues.
9. The average of total number of tourists is a significant predictor for increasing the total tourist revenues.

4. Data Analysis & Results Discussion:

The official statistics of the ministry of tourism and antiquities were divided into two groups, the first group before the exchange rate liberalization, which includes the years from 2012 to 2015 and the second group after the exchange rate liberalization, which includes the years from 2017 to 2020. The following table shows the annual average of the exchange rate.

4.1. First: Descriptive Statistics.

This part presents the descriptive characteristics of the study variables. These variables include total number of tourists, total tourist revenues, total hotel nights and hotel occupancy rate.

4.1.1. Average Exchange Rate:

Table (1): The average annual dollar exchange rate in Egypt

| Before Liberalization | | After Liberalization | |
|-----------------------|--------------|----------------------|---------------|
| Year | Value (LE) | Year | Value (LE) |
| 2012 | 6.0884 | 2017 | 17.7283 |
| 2013 | 6.8989 | 2018 | 17.7717 |
| 2014 | 7.0915 | 2019 | 16.6875 |
| 2015 | 7.7429 | 2020 | 15.7558 |
| Mean | 6.955 | Mean | 16.986 |

This table (1) shows a comparison between two groups of years, the first group before the liberation of the exchange rate and the second group after the liberation of the exchange rate. It was found through this table that the average exchange rate of the US dollar before the liberation policy was equal to 6.96 Egyptian pounds, and its average value after liberation was 16.99 Egyptian pounds. This means that the exchange rate

liberalization policy led to an increase in the value of the US dollar by 10.030405 against the Egyptian pound. Accordingly, the value of the Egyptian pound has decreased significantly.

Table (2): Descriptive statistics of the average exchange rate of the US dollar against the Egyptian pound

| No | Tests | | Before Liberalization | After Liberalization |
|----|-----------------------------|------------|-----------------------|----------------------|
| 1 | Mean | Statistic | 6.9554 | 16.9858 |
| | | Std. Error | 0.34078 | 0.48052 |
| 2 | Minimum | | 6.09 | 15.76 |
| 3 | Maximum | | 7.74 | 17.77 |
| 4 | Range | | 1.65 | 2.02 |
| 5 | Variance | | 0.465 | 0.924 |
| 6 | Standard Deviation | | 0.68156 | 0.96105 |
| 7 | Coefficient of Variance (%) | | 9.79 | 5.66 |

Table (2) shows the descriptive statistics of the average exchange rate in Egypt before and after the liberation of the US dollar exchange rate against the Egyptian pound. The results revealed that the average exchange rate before the liberation of the exchange rate amounted to 6.9554 Egyptian pounds with a standard deviation of 0.68156 and a coefficient of variation equal to 9.79%, while the average exchange rate after the liberation of the exchange rate amounted to about 16.9858 pounds with a standard deviation of 0.96105 and a coefficient of variation equal to 5.66%. Accordingly, there is a decrease in the average exchange rate due to the exchange rate liberalization policy by EGP 10.030405.

4.1.2. The Number of Tourists:

Table (3): Total Number of Tourists in Egypt

| Before Liberalization | | After Liberalization | |
|-----------------------|---------------|----------------------|--------------|
| Year | Tourists | Year | Tourists |
| 2012 | 11.532 | 2017 | 8.292 |
| 2013 | 9.464 | 2018 | 11.347 |
| 2014 | 9.878 | 2019 | 13.026 |
| 2015 | 9.328 | 2020 | 3.700 |
| Mean | 10.051 | Mean | 9.091 |

This table (3) shows the number of tourists in Egypt in million during the period from 2012 to 2020. The results showed a decrease in the average number of tourists after the liberation of the exchange rate (9.09125),

compared to the average before the liberation of the exchange rate (10.0505), by (0.95925) million tourists.

Table (4): Descriptive Statistics of the Total Number of Tourists in Egypt

| No | Tests | | Before Liberalization | After Liberalization |
|----|-----------------------------|------------|-----------------------|----------------------|
| 1 | Mean | Statistic | 10.0505 | 9.0913 |
| | | Std. Error | 0.50749 | 2.04685 |
| 2 | Minimum | | 9.33 | 3.70 |
| 3 | Maximum | | 11.53 | 13.03 |
| 4 | Range | | 2.20 | 9.33 |
| 5 | Variance | | 1.030 | 16.758 |
| 6 | Standard Deviation | | 1.01499 | 4.09370 |
| 7 | Coefficient of Variance (%) | | 10.09 | 45.03 |

Table (4) shows the descriptive statistics of the average number of tourists in Egypt before and after the liberation of the US dollar exchange rate against the Egyptian pound. The results revealed that the average number of tourists before the liberation of the exchange rate amounted to 10,0505 million tourists with a standard deviation of 1.01499 and a coefficient of variation equal to 10.09%, while the average number of tourists after the liberation of the exchange rate amounted to about 9.0913 million tourists with a standard deviation of 4.09370 and a coefficient of variation equal to 45.03%. Accordingly, there is a decrease in the average number of tourists due to the exchange rate policy, estimated at about (0.95925) million tourists.

4.1.3. Total Tourist Revenues.

Table (5): Total Tourist Revenues in Egypt

| Before Liberalization | | After Liberalization | |
|-----------------------|--------------|----------------------|------------|
| Year | Revenues | Year | Revenues |
| 2012 | 9.900 | 2017 | 7.800 |
| 2013 | 5.900 | 2018 | 11.600 |
| 2014 | 7.200 | 2019 | 13.000 |
| 2015 | 6.100 | 2020 | 4.000 |
| Mean | 7.275 | Mean | 9.1 |

This table (5) shows the total tourism revenues in Egypt in billions of dollars during the period from 2012 to 2020. The results showed an increase in the average tourism revenues after the exchange rate liberalization policy (9.1) compared to the average before the exchange rate liberalization policy (7.275), by 1.825 billion US dollars.

Table (6): Descriptive Statistics of Total Tourism Revenues in Egypt

| No | Tests | | Before | After |
|----|-----------------------------|------------|----------------|----------------|
| | | | Liberalization | Liberalization |
| 1 | Mean | Statistic | 7.2750 | 9.1000 |
| | | Std. Error | 0.92048 | 2.02402 |
| 2 | Minimum | | 5.90 | 4.00 |
| 3 | Maximum | | 9.90 | 13.00 |
| 4 | Range | | 4.00 | 9.00 |
| 5 | Variance | | 3.389 | 16.387 |
| 6 | Standard Deviation | | 1.84097 | 4.04804 |
| 7 | Coefficient of Variance (%) | | 25.3 | 44.48 |

Table (6) shows the descriptive statistics of the average tourism revenue in Egypt in billion US dollars before and after the policy of liberalizing the exchange rate of the US dollar against the Egyptian pound. The results revealed that the average tourism revenue before the exchange rate liberalization amounted to \$7.2750 billion with a standard deviation of 1.84097 and a coefficient of variation equal to 25.3%, while the average tourism revenue after the policy of liberalizing the exchange rate amounted to about \$9.1000 billion with a standard deviation of 4.09370 and a coefficient of variation equal to 44.48%. Accordingly, there is an increase in the average tourism revenue due to the exchange rate policy, estimated at about (1.825) billion dollars.

4.1.4. Hotel Occupancy Rate:

Table (7): Average Hotel Occupancy Rate in Egypt

| Before Liberalization | | After Liberalization | |
|-----------------------|--------------------|----------------------|--------------------|
| Year | Occupancy Rate (%) | Year | Occupancy Rate (%) |
| 2012 | 39.0 | 2017 | 34.0 |
| 2013 | 36.0 | 2018 | 30.5 |
| 2014 | 48.0 | 2019 | 36.4 |
| 2015 | 35.4 | 2020 | 50.0 |
| Mean | 39.6 | Mean | 37.73 |

This table (7) shows the average hotel occupancy rate in Egypt during the period from 2012 to 2020. The results showed a decrease in the average hotel occupancy rate after the exchange rate liberalization policy (37.725%) compared to the average before the exchange rate liberalization policy (39.6%), by 1.875% hotel occupancy rate.

Table (8): Descriptive Statistics of the Annual Hotel Occupancy Rate in Egypt

| No | Tests | | Before Liberalization | After Liberalization |
|----|-----------------------------|------------|-----------------------|----------------------|
| 1 | Mean | Statistic | 39.6000 | 37.7250 |
| | | Std. Error | 2.90861 | 4.26720 |
| 2 | Minimum | | 35.40 | 30.50 |
| 3 | Maximum | | 48.00 | 50.00 |
| 4 | Range | | 12.60 | 19.50 |
| 5 | Variance | | 33.840 | 72.836 |
| 6 | Standard Deviation | | 5.81722 | 8.53439 |
| 7 | Coefficient of Variance (%) | | 14.69 | 22.62 |

Table (8) shows the descriptive statistics of the hotel occupancy rate in Egypt before and after the policy of liberalizing the exchange rate of the US dollar against the Egyptian pound. The results revealed that the average occupancy rate before the exchange rate liberalization amounted to 39.6 percent with a standard deviation of 5.81722 and a coefficient of variation equal to 14.69%, while the average hotel occupancy rate after the policy of liberalizing the exchange rate was about 37.725 percent with a standard deviation of 8.53439 and a coefficient of variation equal to 22.62%. Accordingly, there is a decrease in the average hotel occupancy rate due to the exchange rate policy, estimated at 1.875 percent.

4.1.5. Total Hotel Nights:

Table (9): Average Hotel Nights in Egypt Before and After the Liberalization of the Exchange Rate

| Before Liberalization | | After Liberalization | |
|-----------------------|----------------|----------------------|---------------|
| Year | Nights | Year | Nights |
| 2012 | 137.798 | 2017 | 83.783 |
| 2013 | 94.410 | 2018 | 121.497 |
| 2014 | 97.256 | 2019 | 135.373 |
| 2015 | 84.127 | 2020 | 42.970 |
| Mean | 103.398 | Mean | 95.906 |

This table (9) shows the average hotel nights in million in Egypt during the period from 2012 to 2020. The results showed a decrease in the average hotel nights after the exchange rate liberalization policy, 83.783 million nights compared to the average before the exchange rate liberalization policy, 137.798 million nights, by 54.015 million hotel nights.

Table (10): Descriptive Statistics of the Average Annual Tourist Nights in Egypt

| No | Tests | | Before Liberalization | After Liberalization |
|----|-----------------------------|------------|-----------------------|----------------------|
| | 1 | Mean | Statistic | 103.3978 |
| | | Std. Error | 11.80833 | 20.73992 |
| 2 | Minimum | | 84.13 | 42.97 |
| 3 | Maximum | | 137.80 | 135.37 |
| 4 | Range | | 53.67 | 92.40 |
| 5 | Variance | | 557.747 | 1720.577 |
| 6 | Standard Deviation | | 23.61666 | 41.47984 |
| 7 | Coefficient of Variance (%) | | 22.8 | 43.25 |

Table (10) shows the descriptive statistics of the average hotel nights in Egypt before and after the policy of liberalizing the exchange rate of the US dollar against the Egyptian pound. The results revealed that the average hotel nights before the exchange rate liberalization amounted to 103.3978 million nights with a standard deviation of 23.61666 and a coefficient of variation equal to 22.8%, while the average hotel nights after the policy of liberalizing the exchange rate amounted to about 95.9058 million nights with a standard deviation of 41.47984 and a coefficient of variation equal to 43.25%. Accordingly, there is a decrease in the average hotel nights due to the exchange rate policy, estimated at 54.015 million hotel nights.

Table (11): T-test of Hotel Performance Indicators

| No | Factors | Before Liberalization | | After Liberalization | | t-value | d f | Sig. |
|----|-----------------------|-----------------------|-----------|----------------------|-----------|---------|-----|-------|
| | | Mean | Std. | Mean | Std. | | | |
| 1 | Total Revenues | 7.27500 | 1.840969 | 9.10000 | 4.048045 | -0.821 | 6 | 0.443 |
| 2 | Total Tourists | 10.05050 | 1.014986 | 9.09125 | 4.093696 | 0.455 | 6 | 0.665 |
| 3 | Total Hotel Nights | 103.39775 | 23.616659 | 95.90575 | 41.479837 | 0.314 | 6 | 0.764 |
| 4 | Hotels Occupancy Rate | 39.600 | 5.8172 | 37.725 | 8.5344 | 0.363 | 6 | 0.729 |
| 5 | Exchange Rate (\$) | 6.955425 | 0.6815572 | 16.985825 | 0.9610459 | 17.027 | 6 | 0.000 |

This table (11) presents a comparison between the performance indicators of the tourism and hospitality industry before and after the policy of liberalizing

the exchange rate of the US dollar against the Egyptian pound. The t-test showed that there are statistically significant differences in the level of the exchange rate before the liberation of the exchange rate (6.955425) and after the liberation (16.985825). The results revealed an increase in the average annual exchange rate by 10.0304 Egyptian pounds. As for the indicators of total number of tourists, total tourism revenues, total tourist nights and hotel occupancy rate, there are no statistically significant differences for these indicators before and after the exchange rate liberalization policy.

Table (12): The Predictors of Total Revenues Increase

| Variables | B | S.E. | Wald | df | Exp (B) | Sig |
|-----------------------|--------|-------|-------|----|---------|-------|
| Exchange Rate | 0.245 | 0.168 | 2.129 | 1 | 1.277 | 0.145 |
| Total Tourists | 0.897 | 0.659 | 1.849 | 1 | 2.451 | 0.174 |
| Total Nights | 0.086 | 0.060 | 2.108 | 1 | 1.090 | 0.147 |
| Hotels Occupancy Rate | -0.134 | 0.131 | 1.041 | 1 | 0.875 | 0.308 |

This table (12) shows the sources of tourism revenue increase in Egypt using the binary logistic regression test. The results revealed that the exchange rate indicators, the total number of tourists, the total tourist nights and the hotel occupancy rate are not considered a predictor of an increase in the rate of tourism revenues in Egypt.

5. Conclusion:

This research aims to study the impact of the exchange rate liberalization of the US dollar against the Egyptian pound on the performance of the hotel industry in Egypt. Therefore, the tourism statistics were divided into two groups, the first group before the exchange rate liberalization and includes the years from 2012 to 2015 and the second group after the exchange rate liberalization and includes the years from 2017 to 2020, and 2016 was ignored because it was the year in which the exchange rate was liberalized. The performance indicators in the two groups have been analyzed, which include the average exchange rate, total number of tourists, total tourism revenues, total hotel nights and average hotel occupancy. The results showed that the average exchange rate before the liberation of the exchange rate amounted to 6.9554 Egyptian pounds with a standard deviation of 0.68156 and a coefficient of variation equal to 9.79%, while the average exchange rate after the liberation of the exchange rate amounted to about 16.9858 pounds with a standard deviation of 0.96105 and a coefficient of variation equal to 5.66%.

Accordingly, there is an increase in the average exchange rate by 10.030405 pounds. This is due to the exchange rate liberalization policy. With regard to the total number of tourists, the average number of tourists before the liberation of the exchange rate amounted to 10.0505 million tourists with a standard deviation of 1.01499 and a coefficient of variation equal to 10.09%, while the average number of tourists after the liberation of the exchange rate was about 9.0913 million tourists with a standard deviation of 4.09370 and a coefficient of variation equal to 45.03%. Accordingly, there is a decrease in the average number of tourists due to the exchange rate policy, estimated at about (0.95925) million tourists. Moreover, the average tourism revenue before the exchange rate liberalization amounted to \$7.2750 billion with a standard deviation of 1.84097 and a coefficient of variation equal to 25.3%, while the average tourism revenue after the policy of liberalizing the exchange rate amounted to about \$9.1000 billion with a standard deviation of 4.09370 and a coefficient of variation equal to 44.48%. Accordingly, there is an increase in the average tourism revenue due to the exchange rate policy, estimated at about (1.825) billion dollars.

The results revealed that the average occupancy rate before the exchange rate liberalization was 39.6 percent with a standard deviation of 5.81722 and a coefficient of variation equal to 14.69%, while the average hotel occupancy rate after the policy of liberalizing the exchange rate was about 37.725 percent with a standard deviation of 8.53439 and a coefficient of variation equal to 22.62%. Accordingly, there is a decrease in the average hotel occupancy rate due to the exchange rate policy, estimated at 1.875 percent. In addition, the average hotel nights before the exchange rate liberalization amounted to 103.3978 million nights with a standard deviation of 23.61666 and a coefficient of variation equal to 22.8%, while the average hotel nights after the policy of liberalizing the exchange rate amounted to about 95.9058 million nights with a standard deviation of 41.47984 and a coefficient of variation equal to 43.25%. Accordingly, there is a decrease in the average hotel nights due to the exchange rate policy, estimated at 54.015 million hotel nights. Finally, the t-test showed that there are statistically significant differences in the level of the exchange rate before the liberation of the exchange rate (6.955425) and after the liberation (16.985825). The results revealed an increase in the average annual exchange rate by 10.0304 Egyptian pounds. As for the indicators of total number of tourists, total tourism revenues, total tourist nights and hotel occupancy rate, there are no statistically significant differences for these indicators before and after the exchange rate liberalization policy. Using the binary logistic regression test, the indicators of the exchange rate, the total number of tourists, the total tourist nights, and the hotel occupancy rate are not considered a predictor of

an increase in the rate of tourism revenues in Egypt. Finally, this research stated the following hypothesis:

1. There is a statistical difference between the groups of before exchange rate liberalization and after exchange rate liberalization with regard to the average of US dollar exchange rate .
2. There is no statistical difference between the groups of before exchange rate liberalization and after exchange rate liberalization with regard to the average of hotel nights.
3. There is no statistical difference between the groups of before exchange rate liberalization and after exchange rate liberalization with regard to the average of hotel occupancy rate.
4. There is no statistical difference between the groups of before exchange rate liberalization and after exchange rate liberalization with regard to the average of total number of tourists.
5. There is no statistical difference between the groups of before exchange rate liberalization and after exchange rate liberalization with regard to the average of total tourist revenues.
6. The average of US dollar exchange rate is not a significant predictor for increasing the total tourist revenues.
7. The average of hotel nights is not a significant predictor for increasing the total tourist revenues.
8. The average of hotel occupancy rate is not a significant predictor for increasing the total tourist revenues.
9. The average of total number of tourists is not a significant predictor for increasing the total tourist revenues.

6. Recommendations & Future Studies:

This research aims to study the impact of the exchange rate liberalization policy on the performance of the hotel industry in Egypt. Despite the increase in the value of the dollar exchange rate against the Egyptian pound due to the exchange rate liberalization policy, tourism and hotel indicators such as the total number of tourists, total tourist revenues, total hotel nights and hotel occupancy rate do not differ significantly before and after the exchange rate liberalization policy. These results are governed by other factors such as the shortness of the time series discussed in the research. This research dealt with the study of tourism and hotel indicators during four years before and after the exchange rate liberalization policy, and therefore this time series is considered very short. also, the factor of the impact of the Covid-19 pandemic during the years 2019 and 2020 on the hotel industry. Based on the previous results, this research makes the following recommendations:

1. Studying the impact of the exchange rate policy on the hotel industry by comparing hotel performance indicators over a set of months over a five-year scale before and after the exchange rate liberalization policy.
2. Study the impact of the Covid-19 pandemic on the tourism and hospitality industry.
3. Due to the high exchange rate of the US dollar, the appreciation of the dollar should be used as a competitive advantage to attract the largest number of foreign tourists.
4. Due to the depreciation of the Egyptian pound against the dollar, hotel programs must be implemented, "the comprehensive program", at reduced prices to encourage domestic tourism in Egypt.
5. The official supervision of hotels should control the prices of services, in order to avoid excessively increasing the prices of services in hotels.

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