

# Influence of Suez Canal on Egyptian National Economy— From Canal Opening in 1869 to Nationalization in 1956

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## 1. Introduction

The Suez Canal is a megaconstruction project in modern Egypt that opened in November 1869 (Picture 1). The completion of the Suez Canal significantly shortened the sea transport distance between Europe and Asia and contributed to the development of maritime trade and the world economy. Therefore, previous research on the Suez Canal has focused on topics such as the original concept of the canal, its construction and operation, the British acquisition of the canal, and Gamal Abdel Nasser's nationalization of the Universal Company of the Maritime Canal of Suez (hereinafter, the “Suez Canal Company”) and subsequent upheaval. In contrast, few studies have addressed the economic benefits of the Suez Canal, especially those accruing to the Egyptian national economy.



Picture 1. Port Said, Northeast Egypt: Container Ship through Suez Canal in 2015 (Source: Author)

This study has two primary objectives. The first is to estimate the economic benefits that accrued from the Suez Canal to modern Egypt—specifically, to estimate the gross national income that accrued to Egypt from the canal's opening in 1869 to its nationalization in 1956. The second is to clarify the economic benefits that accrued from the Suez Canal to the Egyptian national economy by examining estimated time-series data. In addition, this study clarifies both the influence of the Suez Canal project on the Egyptian national economy and how economic ties between Egypt and the rest of the world have changed as a result. In this respect, the results of this study are expected to contribute to research progress in this field. In addition, our research methodology uses the financial information published by the Suez Canal Company and reference materials related to its business condition for macroeconomic analysis. This feature aims to achieve our study objectives using Suez Canal Company financial data.

The rest of this study is organized as follows. Section 2 reviews previous studies. Section 3 introduces the data used in this study and explains methods for estimating gross national income. Section 4 estimates gross national income derived from the Suez Canal. Section 5 discusses the estimated time-series data and evaluates the economic benefits that have accrued from the Suez Canal to the Egyptian national economy. Finally, section 6 presents the conclusions.

## 2. Literature Review

The Suez Canal, which opened in 1869 was built by the Suez Canal Company and is the subject of this study. The Suez Canal Company was founded in 1858 by Ferdinand de Lesseps, the former French consul to Cairo.<sup>(1)</sup> The Suez Canal Company, which was constituted to build the Suez Canal, overcame the difficult challenges of canal construction and to complete the canal in 1869 (Picture 2). Incidentally, quite a few studies, mainly appearing in the literature in various European languages, have examined the details of the establishment of the company and the period from the canal's initial construction to its completion. On the other hand, this study covers the period from 1869 onwards, with the Suez Canal Company being responsible for the construction, maintenance, and management of the Suez Canal since its opening. When the canal first opened, the Egyptian government



analyzing the role of the Suez Canal on the Egyptian national economy. Therefore, this study estimates the gross national income accruing to Egypt during the period between the opening of the Suez Canal in 1869 and its nationalization in 1956 using financial information published by the Suez Canal Company and reference materials related to its business condition.

### 3. Materials and Methods

#### *Data*

The data used in this study are sourced primarily from the *Assemblée Générale des Actionnaires: Rapport Présenté au Nom du Conseil d'Administration* and the *Le Canal de Suez, Bulletin Decadaire: Journal Maritime et Commercial*, published by the Suez Canal Company and secondarily from the *Annuaire Statistique de l'Egypte*, published by the Statistics Department, the Egyptian Ministry of Finance. The data cover the period between the opening of the Suez Canal in 1869 and the nationalization of the Suez Canal Company in 1956. Where data could not be obtained, time-series data were estimated using available data and documents obtained from sources other than those published by the Suez Canal Company. Hence, this study estimates gross national income from the Suez Canal from 1870 to 1956.

#### *Theoretical Framework*

This study intends to clarify the economic benefits that the Suez Canal accrued to modern Egypt—specifically, gross national income accruing to Egypt during the period between its opening in 1869 and its nationalization in 1956. To this end, gross national income from the Suez Canal (GNIS) is defined as follows:

$$\text{GNIS} = \text{GVAS} - [\text{Factor income paid abroad}] - [\text{Reinvested earnings}]$$

where gross value added for the Suez Canal Company, GVAS, is the value of gross sales minus intermediate inputs in the company, and factor income paid abroad represents the sum of the labor and capital incomes of nonresidents. The gross value added by the Suez Canal is first calculated, and then the gross national income from the Suez Canal is determined.

### *Methods of Estimation*

First, the nominal gross value added by the Suez Canal is calculated by deducting the value of intermediate inputs at current prices (the cost of goods sold for the Suez Canal Company) from the value of outputs at current prices (total revenue of the company). The value of nominal outputs is the total revenue of the Suez Canal Company (*Annuaire Statistique de l’Egypt* 1909–1959).

On the other hand, the value of nominal intermediate inputs is calculated by deducting financial expenses, personnel expenses, capital expenses (the costs of developing, improving and dredging the canal, plus depreciation), and other capital expenses (expenditures including major repairs) from the total expenses of the Suez Canal Company (*Annuaire Statistique de l’Egypt* 1909–1959). Here, personnel expenses are calculated using the wage rate and the number of employed persons. Specifically, the wage rate is estimated using the total annual remuneration for employed persons per employee from 1870 to 1874 (Fitzgerald, Vol. II 1876) and the average wage index in France (Fourastié 1951). Further, the number of employed persons is the sum of employed persons and contractors (Bouin 2010). The ratio of capital expenses to operating expenses is calculated, including personnel expenses from 1870 to 1874 (Fitzgerald, Vol. II 1876). The average value of the ratio is considered constant since 1875, so capital expenses since 1875 are obtained by multiplying the constant ratio by the operating expenses in each year. For other operating expenses, the ratio of operating expenses is calculated, including personnel expenses from 1871 to 1874 (Fitzgerald, Vol. II 1876). The value obtained by multiplying the average value of the ratio by 0.5 is considered constant since 1875, so other operating expenses since 1875 are obtained by multiplying the constant ratio by the operating expenses in each year.

Second, nominal gross national income from the Suez Canal is calculated by deducting factor income paid abroad and reinvested earnings at current prices from nominal gross value added by the Suez Canal. Factor income paid abroad is the sum of wages and salaries paid to nonresident employees (other than Egyptians) and capital income to nonresidents (dividends for shareholders, founders, etc.). Here, wages and salaries paid to nonresident employees are calculated by multiplying the wage rates of nonresidents by the number of employed persons except for Egyptians. Specifically, the wage rate is estimated using the total annual remuneration for employed persons per employee from 1870 to 1874

(Fitzgerald, Vol. II 1876) and an average wage index in France (Fourastié 1951; Mitchell 1984). Additionally, the number of employed persons in years when data are not available is estimated using the ratio of the number of Egyptian employees to the number of employees except for Egyptians (Bouin [2010]). For capital income to nonresidents, the distribution of profits to shareholders published by the Suez Canal Company is used as is (*Assemblée Générale des Actionnaires* 1860–1958; *Annuaire Statistique de l’Egypt* 1909–1959).

On the other hand, the reinvested earnings in the years between 1870 and 1932 and between 1954 and 1956, when data are available, are calculated using the value of reinvested earnings published by the Suez Canal Company (*Assemblée Générale des Actionnaires* 1860–1958; *Annuaire Statistique de l’Egypt* 1909–1959). In addition, the reinvested earnings between 1934 and 1953, when the data are not available, are calculated by multiplying short- and long-term investments by short- and long-term interest rates, respectively. Specifically, for short- and long-term investments, the average values of their ratios to total investment from 1954 to 1957 are calculated, so short- and long-term investments from 1934 to 1953 are obtained by extrapolating short- and long-term investments in 1954 forward using their average values. The short- and long-term interest rates are the interest rates of the United Kingdom and France, which are the Suez Canal Company’s main destination countries for investment (Thomas and Dimsdale 2017; Federal Reserve Bank of St. Louis 2012). Here, short- and long-term interest rates are estimated using the weighted average values of the shares of total investment by each country.

#### 4. Estimation Results

Figure 1 shows the estimated results of nominal gross value added and gross national income in the Suez Canal. This figure indicates main findings: (i) The estimated gross value added by the Suez Canal in 1954 is 27,269 thousand Egyptian pounds. This result is consistent with the gross value added by the Suez Canal obtained from Egypt’s first Input–Output Table in 1954, which was 27,627 thousand pounds.<sup>(4)</sup> This may give credibility to our methods for estimating the gross value added by the Suez Canal. (ii) During the decade following the opening of the Suez Canal in 1869, both the gross value added and the gross national income from the Suez Canal were sluggish due to stagnation in the number of

vessels transiting the Suez Canal. The stagnation arose from Franco–Prussian War and the resulting avoidance of navigation through the area by shipping companies (Figure 2). Additionally, a slight difference existed between gross value added and gross national income during this period. This result can be related to a low level of factor income paid abroad or reinvested earnings. (iii) The annual average gross value added by the Suez Canal from 1880 until 1938 was approximately 2.5 times larger than the gross national income. This result indicates that gross value added by the Suez Canal was increasing more rapidly than gross national income during the same period. (iv) The estimated gross value added and gross national income by the Suez Canal, which had dropped sharply during World War II, rapidly recovered after the end of the war. In addition, the annual average gross value added from 1939 until 1956 was approximately 1.6 times larger than gross national income, and the gap between the two was reduced compared with before. This result indicates that gross national income from the Suez Canal was increasing more rapidly than gross value added during the same period.

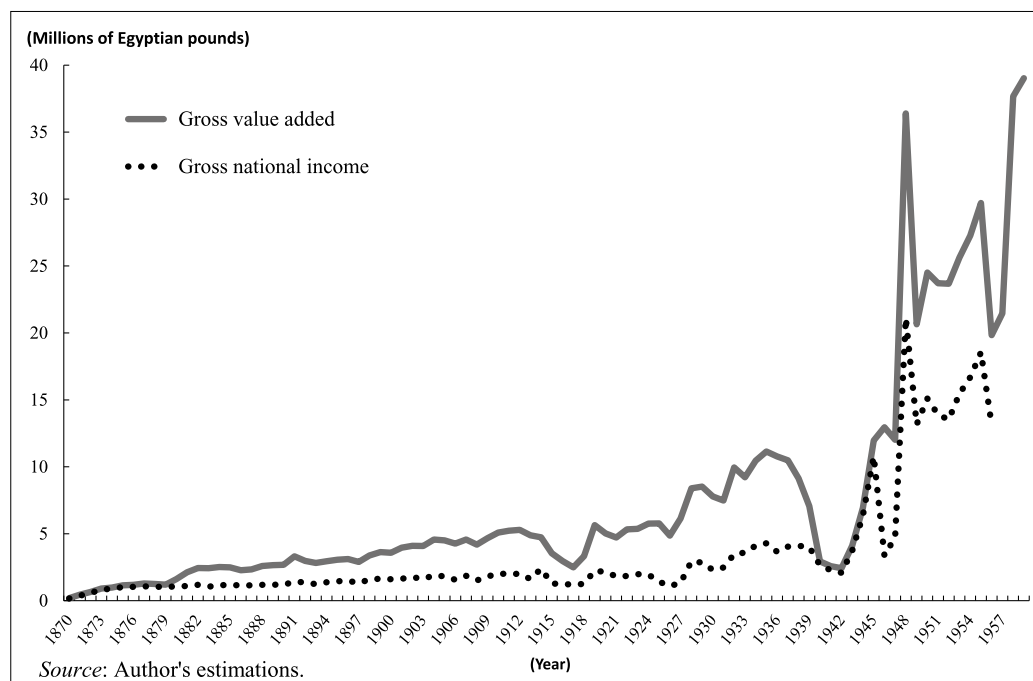


Figure 1. Estimated Results of Nominal Gross Value Added and Gross National Income from Suez Canal

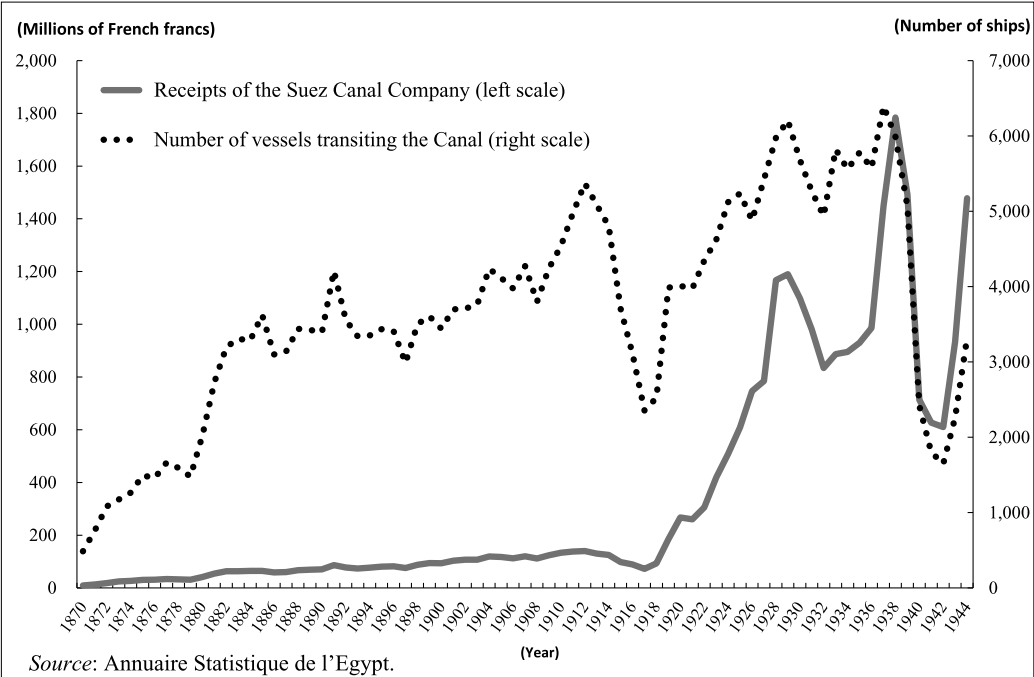


Figure 2. Receipts of Suez Canal Company and Number of Vessels Transiting Canal

5. Discussion and Implications

*Economic Benefits Accruing from the Suez Canal to Modern Egypt*

From the analysis of gross value added and gross national income estimates from the Suez Canal in this study, we have obtained important findings. First, this study finds that the annual average gross value added by the Suez Canal from 1880 until 1938 was approximately 2.5 times larger than gross national income. This can be explained by the fact that expanding international trade since 1880 led to increased toll revenue for the Suez Canal, and the Egyptian government had waived its right to demand a dividend distribution (15% of net profits) from the Suez Canal Company from 1880 onward<sup>(5)</sup>. Specifically, the former led to an increase in the growth rate of the Suez Canal’s gross value added, and the latter led to sluggish growth in gross national income from the Suez Canal. This finding may indicate that the Suez Canal accrued sufficient economic benefits to the French and British shareholders and the founders, who held an interest in the Suez Canal Company until World War II, because the Suez Canal gained a position as a major shipping route connecting the East and the West despite increased uncertainty over international maritime



transport due to the two World Wars and the Great Depression. On the other hand, the economic benefits accruing from the Suez Canal to the Egyptian national economy are considered small due to the Egyptian government's waiver of its interests in the Suez Canal and the small number of Egyptian employees at the Suez Canal Company.

This study reveals that the estimated gross value added and gross national income from the Suez Canal recovered rapidly after the end of World War II, that the annual average gross value added from 1939 until 1956 was approximately 1.6 times larger than that of gross national income, and the gap between the two was reduced compared with before. On the whole, the rapid recovery in gross value added and gross national income is chiefly attributed to the resumption of international maritime trade following the end of World War II. Furthermore, wages and salaries paid to resident employees increased, with a higher share of Egyptian employees to all employees since the end of the 1930s, which led to an increase in gross national income from the Suez Canal. This result relates to a reduction in the gap between gross value added and gross national income. Furthermore, this result is somewhat consistent with the view of Bonin (2010: 421), who noted that the Suez Canal Company was forced to accelerate the tempo of recruitment to address the tremendous growth in traffic through the canal. This situation may have favored Egyptian employees, accordingly leading to growth in the share of Egyptian employees since the end of the 1930s.

Finally, this study finds that economic benefits accruing from the Suez Canal to the Egyptian national economy increased for about 10 years until its nationalization in 1956. For instance, the ratio of gross national income to gross value added by the Suez Canal from 1946 to 1955 on an annual average basis was approximately 0.55, which was higher than the 0.36 level from 1914 to 1938 during the two World Wars. This result can be related to not only increased wages and salaries paid to Egyptian employees but also the positive effects of Egyptian companies engaging in business with the Suez Canal Company. In other words, the Suez Canal had more spillover effects on the Egyptian economy than before. This result may indicate that the importance of the Suez Canal to the Egyptian economy increased for about 10 years until its nationalization in 1956.

### *Implications*

As mentioned, the annual average gross value added by the Suez Canal from 1880 until

1938 was approximately 2.5 times larger than that of gross national income. Accordingly, the economic benefits that the Suez Canal accrued to the Egyptian national economy are small. In this regard, the approach of Anis (1950), who estimated national income for Egypt from 1937 to 1945, excluding income from the Suez Canal, is considered somewhat appropriate. For instance, in this study, the estimated gross national income from the Suez Canal in 1937 and 1945 is 4,032 and 10,773 thousand Egyptian pounds, respectively, which is smaller than the 5,300 and 15,400 thousand Egyptian pounds of gross national income from the communication and transportation sectors, as estimated by Anis (1950). Nevertheless, these values are not necessarily so small that they are negligible. This implies that estimating the gross national income of the communication and transportation sectors, including the Suez Canal is required even before the end of World War II.

This study finds that wages and salaries paid to resident employees increased with growth in the share of Egyptian employees to all employees from the end of the 1930s, which led to an increase in gross national income from the Suez Canal from 1939 until 1956. However, despite the rapid recovery in gross national income due to resumed international maritime trade following the end of World War II, a higher share of Egyptian employees to all employees since the end of the 1930s did not necessarily lead to rapid expansion in the wages and salaries paid to Egyptian employees. For instance, the share of Egyptian employees to all employees from 1932 to 1948 grew from 43.0% to 70.0%, but the share of wages and salaries paid to Egyptian employees to wages and salaries paid to all employees increased from 27.4% to 53.8%. This may imply that the wage rate of non-Egyptian or European employees was higher than that of Egyptian employees. A similar view was espoused by Bonin (2010: 272), who noted that European laborers were paid more than their Egyptian counterparts. Therefore, the reason behind an increase in wages and salaries paid to Egyptian employees should be carefully examined because a distinction existed between Egyptian and non-Egyptian employees in terms of wages and salaries or the wage rate.

This study reveals that the economic benefits that accrued from the Suez Canal to the Egyptian national economy further increased for about 10 years until its nationalization in 1956. As pointed out, this result indicates that the Suez Canal had more spillover effects on the Egyptian economy than before. This further implies that such economic changes

may have provided an incentive for Egypt's president, Gamal Abdel Nasser, to nationalize the Suez Canal Company. Specifically, the 4 years from the Egyptian Revolution in July 1952 to the nationalization of the Suez Canal Company in July 1956 may have allowed Nasser and his followers sufficient time to examine the economic benefits accruing from the Suez Canal to the Egyptian national economy.<sup>(6)</sup> Therefore, this point should be carefully considered when exploring the reasons behind their activities to nationalize the Suez Canal Company.

## 6. Conclusions

This study examines the influence of the Suez Canal on the Egyptian national economy from its opening in 1869 to its nationalization in 1956. Specifically, the study estimates gross national income from the Suez Canal accruing to Egypt. In addition, examining estimated time-series data, the study clarifies the economic benefits that the Suez Canal accrued to the Egyptian national economy.

Our major conclusions are as follows. First, the gross value added by and gross national income from the Suez Canal, which dropped sharply during World War II, recovered significantly after the end of the war. Additionally, the gap between gross value added and gross national income narrowed compared with its prior level. Second, wages and salaries paid to resident employees increased with growth in the share of Egyptian employees to all employees from the end of the 1930s, leading to increased gross national income from the Suez Canal and a reduction in the gap between gross value added and gross national income. Third, following the end of World War II, the Suez Canal had greater spillover effects on the Egyptian economy than in the period before World War II. Specifically, the importance of the Suez Canal to the Egyptian economy increased for about 10 years until its nationalization in 1956. Such economic changes may have provided an incentive for Nasser to nationalize the Suez Canal Company.

Despite the aforementioned discussions and implications, this study has some limitations. First, this study calculates personal expenses using the wage rate and number of employed persons, but the wage rate is estimated using the same wage index regardless whether employees are residents or nonresidents. Accordingly, personal expenses are likely

to be overestimated. In addition, strict estimates of reinvested earnings in year when data were not available had to be made using other useful materials, which could make those estimates less certain. Second, this study estimates the value of gross sales and intermediate inputs for the Suez Canal Company; however, we do not examine spillover effects on the port facilities and surrounding areas belonging to the Suez Canal. Third, our findings indicate that wages and salaries paid to resident employees increased with growth in the share of Egyptian employees to all employees from the end of the 1930s. In this regard, an increase in the number of Egyptian employees relates to changes in the management structure of the Suez Canal Company, but this study does not consider the effects of those changes. These points should be examined in future analyses.

## Notes

- (1) Regarding a move toward the construction of the Suez Canal, De Lesseps obtained the first concession allowing him to establish a company for the construction of a canal, which was issued on November 30, 1854, by Khedive Mohammed Said Pasha. The concession conveyed the exclusive right to operate the canal for 99 years from the date of its opening. Originally, the idea of a canal connecting the Mediterranean with the Red Sea was pursued by French engineer Maurice Adolphe Linant de Bellefonds as early as 1821 (Bouin 2010: 39) before De Lesseps proposed to dig a channel through the Suez isthmus. A second concession was granted to De Lesseps on January 5, 1856. The concession required the company to secure the entire neutrality of the Canal with regards to all merchantmen and stipulated that the canal and the ports belonging to it were open to every merchant vessel.
- (2) The company issued 400,000 shares at 500 francs each to finance the original construction cost of 200 million francs (8 million Egyptian pounds). Of these shares, French subscribers, the Egyptian government, and foreign subscribers owned 207,111, 177,642, and 15,247 shares, respectively (Hallberg 1931: 159; Bouin 2010: 193). Initially, the Egyptian government was to own 92,136 shares. However, the 85,506 shares set aside for Britain, Austria, Russia, and the United States were not bought because there were no applications from those countries, so the Egyptian government bought those shares by taking out a loan of 28 million francs. In addition, shareholder dividends were initially guaranteed from 1859 as fixed dividends of 25 francs per annum (preferential dividends of 5% per annum) and could receive 71% of distributable profits (the amount remaining after deducting preferential dividends, retained profits, interest, and amortization payments to holders of obligations, etc. from ordinary profits; namely, net profits). Further, the article stipulated in the original concession and amendments allowed the Egyptian government, founders (founding members), administrators (management), and employees to receive 15%, 10%, 2%, and 2% of net profits, respectively. Furthermore, on November 25, 1875, the Khedive Isma'il Pasha sold 176,602 shares of the company to Britain for 3,976,580 pounds sterling due to a fiscal deterioration (Hallberg 1931: 240).
- (3) Navigation on the Suez Canal was frequently suspended due to the Suez Crisis that occurred after Egypt nationalized the Suez Canal Company and the Third and Fourth Arab–Israeli Wars. But since the mid-1970s, the numbers and weights of vessels transiting the Suez Canal have increased with the expansion of world trade, resulting in the Suez Canal being a significant source of foreign currency income for Egypt.

- (4) Gamal E. Eleish presented at the International Conference on Input–Output Techniques in 1961 with Egypt's first Input–Output Table, which was prepared by the National Planning Committee. This table was an interflow design originally on the order of 83 x 83, which was later aggregated to 33 x 33.
- (5) In 1880, the Egyptian government waived the right to receive 15% of the Suez Canal Company's net profits by transferring the shares of the Egyptian government to the Crédit Foncier de France (mortgage bank of France) in exchange for the Khedive's debts to French creditors for 22 million francs (Wilson 1939: 109). However, until 1936, the Suez Canal Company paid the Egyptian government 30,000 francs annually as compensation for control of the Suez Canal, which was increased from 1937. Moreover, the company paid the Egyptian government 7% of distributable profits from 1949 (Christian 1947: 263; Hansen and Tourk 1978: 941).
- (6) According to Muṣṭafā al-Ḥafnawī, who was an Egyptian jurist and journalist, Gamal Abdel Nasser had considered nationalizing the Suez Canal Company after the Egyptian Revolution in July 1952. However, Nasser abandoned the nationalization immediately after the revolution because Britain maintained a garrison to secure the Suez Canal zone. He then seems to have planned its nationalization immediately after the withdrawal of British troops from the Suez base. In the end, after British forces withdrew from the Suez Canal zone and Egypt on March 24, 1956, Nasser declared nationalization of the Suez Canal Company on July 26, 1956, which was the next month of his appointment to president (al-Ḥafnawī 2020: 178–179).

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