

Egypt's Finances and Foreign Campaigns, 1810-1840.

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I. Introduction:

In May 1805 Egypt selected for the first time in its long history a ruler of its own choice. "Muhammad Ali Pasha" was chosen by the Cairo intellectuals (*Ulemas*) and community leaders to rule them after a long period of turmoil following the departure of the French forces who tried to subjugate Egypt, 1798-1801. The expulsion of the French from Egypt was the result of three supporting forces, the Ottomans who had ruled Egypt since 1517, the British, who would not allow the French to threaten their route to India, and the Egyptian nationals who staged two costly revolts which made the continuation of French presence untenable.

Although "Muhammad Ali" had served in the Ottoman army which was sent to regain Egypt, he was willing to accept the peoples' mandate to rule them fairly and according to their wishes (Al-Jabbarti, 1867) and (Dodwell, 1931).

Such an accord was not accepted by the Ottomans, and the British alike. The first tried to remove him to another post after one year of his rule. Again, popular support and the right amount of bribes to the Sultan and his entourage assured his continuation as "*Waly*" (viceroy) of Egypt. A year later, the British sent an occupying force under "Frasier" that was defeated, a short distance of its landing in Alexandria, near Rosetta (1807). For most of the years of his long reign, 1805-1848, "Muhammad Ali Pasha" (we shall refer to him also as the Pasha) had to engage in five major wars to solidify his position as a ruler of Egypt. These wars were not only costly, but they also required creation almost from scratch a modern army and navy. In this paper, we shall present a glimpse of these fundamental efforts towards modernization and creation of a modern army, and then concentrate more on how this wily ruler was able to finance his foreign campaigns.

II. An Early Development Experiment in The Nile Valley:

Although this paper concentrates on the financing of Muhammad Ali's foreign campaigns, we should not forget that these campaigns would not have been possible without a general and, in retrospect, admirable development experiment that touched all aspects of life in Egypt in the first half of the Nineteenth Century. Such an early development experiment, which was unique in Africa and the Middle-East, can be easily attributed to the ingenuity and fortitude of one man: Mohamed Ali Pasha. The Pasha was quick to realize the value of this new country that he came to rule. He started a unique venture to develop it, secure its independence and even enlarge its territory. To realize these major objectives in a country of merely 2.5 million inhabitants, who here-to-for lived in poverty and ignorance, was a major undertaking.²

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² For various estimates of the Egyptian population in the early days of the 19th Century see (Issawi, 1961).

Although the figure of 2.5 million is common and was adopted by the French "savants" during their stay in Egypt, 1798-1801, more recent estimates are closer to 4.0 million (Cuno, 1992).

The Pasha was also aware of the many challenges to his rule imposed by foreign powers and local competitors. He began to remove his local challengers while appeasing foreign powers. Gradually, he turned to an absolute monarch as he marginalized the "*Ulema*" and civic leaders who brought him to the throne and massacred the warring military elite, the Mamlukes, 1811, who had always shared the Ottomans in governing Egypt. After he was able to subdue all local forces that could threaten his rule, he endeavored to strengthen his army and venture out to invade the Sudan and quench the Wahabbi rebellion in the Arabian Peninsula, on behalf of the Sultan (Dodwell, 1931).

III. Muhammad Ali's Army & Foreign Wars:

Muhammad Ali Pasha was aware that Egypt will not be left in peace without a strong army and navy. Raising an army required large expenditures, not only for recruitment and training but also for establishing the supporting infrastructure (roads, schools, hospitals..) and industry (textile mills, cannon factories, arsenal..) that would supply his army. In addition, as his military power began to be evident to the Sultan, especially after his success in crushing the Wahabbi insurgency, he was called upon to help the Porte³ in the Greek War of Independence. Muhammad Ali Pasha was happy to win the Sultan's favor to the extent that he distributed LE 100,000 in alms and gifts in Istanbul on this "merry" occasion.

1- Wars under Different Justifications: Muhammad Ali Pasha engaged in five foreign wars (Ibrahim, 2009). After his first success against the British expedition to occupy Egypt, 1807, he sent five campaigns to the Hejaz in 1811-18, then he began his expansion to the Sudan (1820-), and later joined the fight in Crete and Morea (The Peloponnese), Greece, 1823-28, and finally had two campaigns in Syria against the Ottomans, 1831 and 1839. The Pasha did not chose to engage in his earlier foreign campaign especially in Arabia and Greece. In both cases, he was requested to engage in these campaigns by his master, the Ottoman Sultan. He could not refuse to help in these campaigns, and his later apology to help the beleaguered Sultan in his fight with the Russians in Crimea was not well taken.

By contrast, his campaigns in the Sudan had imperialistic designs as he was lured there by the prospect of finding gold mines and to expand his trade. His later campaigns against the Sultan in Syria and Turkey proper were motivated by his desire to finally extract the independence of his adopted country and ensure the hereditary rule of his family⁴.

These latter two campaigns were largely successful until British and Austrian forces intervened to help the Sultan against his troublesome "Viceroy."

Finally, the Egyptian question was settled in the London convention of 1840 that ensured Muhammad Ali Pasha the hereditary rule of his family in Egypt so long as he was content to stay within his African borders, accept to pay tribute to the Sultan, reduce his army to 18,000 soldiers, open his country to foreign goods, and dismantle his monopoly system of trade.

³ The "Porte", or High Door (*al-Bab al-A'aly* in Arabic) refers to the headquarters of Ottoman administration in Istanbul, and thus indicated Ottoman Imperial orders or directives, and sometimes indicated the Sultan himself.

⁴ There is a great dispute among scholars as to the motive for the Pasha's wars. So while (Al-Sayyid-Marsot, 1984) believes that he was after securing the independence of Egypt and the creation of a nation-state, others claim more practical and mercantilist reasons for this expansion. The invasion of the Sudan clearly qualifies under the second claim. The Pasha was driven by dreams of finding gold mines there. In addition the benefits of trade in camels and slaves were not lost to him. A camel bought in Berber, Sudan, would cost 160-200 pts.; if shipped to Cairo it would seek 1000-2000 pts. (Burkhardt, 1819).

2- Building a New Army: The establishment of the Egyptian army by Muhammad Ali Pasha was a spectacular feat. He not only departed from Ottoman norms and introduced modern war techniques, but he also forsook the old tradition of using Mamlukes and imported mercenaries and was able to build a new army using the local population. These local recruits were able to quickly master modern European training and discipline (Fahmy, 1997).⁵

To train his new army, Muhammad Ali Pasha established a military school in Aswan in Southern Egypt (Dodwell, 1931) and (El-Rafai,1989). The idea was to extract them away from the distractions of big cities.

Attracting of recruits from the peasant population was not an easy affair. Young peasants were used to sedentary life in their villages and may not have left home before (Fahmy, 1997). The Pasha ordered all kinds of inducements including better food (e.g. rice and meat twice a week), clothing and a monthly salary of 8 pts. Also, military service was limited to three years. (Zaki, 1990). All the same, conscription of the new army must have taken a big toll on village society and economy. To start with, the size of the population was too small, only 2.5 million according to most accounts. Thus recruiting an army would deprive production of many needed working hands. If we assume that those in the right age group (15-40 years) were 40% of that the total population, those suitable to be drafted would be one million people. Only half of these are men. So the pool of eligible draftees was 500,000. The size of the army grew rapidly from about 55,000 during the Greek campaign to an average of 120,000 during the Syrian campaigns (See Table 1 below). In other words, the army would have constituted 12% to 20% of the eligible draftees.⁶ This is definitely a high percentage of the population in a country that depends on young men in labor-intensive agriculture.

The new army gradually improved its performance even though the Pasha's foreign campaigns were novel in type and terrain. Three of these, namely the Wahabbi Campaign (1811-18), Invasion of Sudan (1820-26) and Greek War of Independence (1823-29) were set against unknown territories in the Arabian Peninsula, Sudan, and Greece. They may also be described as "counter-insurgency" operations where the enemy was irregular and followed guerrilla tactics. Needless to say that this type of warfare was expensive and unpredictable. Muhammad Ali Pasha won the first two wars but was defeated in the third mostly because of European intervention to the side of the Greeks. The Naval battle of Navarino (Oct. 20, 1827) in which the navies of major European powers, especially Britain, France and Russia participated, dealt the death blow to his intervention in Europe (Dodwell, 1931) and (El-Rafai, 1989). The two remaining campaigns in Syria and Turkey proper were against the Ottoman army itself. The latter had superiority of numbers and terrain but Muhammad Ali Pasha's son Ibrahim won through his determination, good judgment, and modern tactics. The Syrian campaigns had a distinctive feature as the local population was, at first, on the side of the Egyptian army (Ibrahim, 2009). Ibrahim was received

⁵ Some would wonder about what is novel about using the local population in the army! After all the Pharaohs had a strong local army. The situation in Egypt, at least since the eleventh Century, was greatly different. Egyptian rulers depended on imported, actually slave warriors (Mamlukes) from Central Asia. The Mamlukes were white slaves bought or abducted from central Asia. They helped defeat the last crusaders and the Mongols in Syria. (Young, 1934). The Ottomans realized the inherent capabilities of this warring breed and were willing to rely on them for some administrative functions and for tax collection.

⁶ A recent French chronicle concurs. It estimates that the degree of the Pasha's conscription would have meant marshaling a 1.5 million army if Egypt had the same population as France on the eve of World War I (Panzac, 2012).

as a liberator from the yoke of Ottoman rule (Barakat, 1939). But once again, Egypt was denied victory through European intervention in support of the Porte.

The following table gives a breakdown of the Pasha's army in 1828 and 1833.

Table 1.

Growth of the Egyptian Army, 1828-33

Year

Original force

Remaining The difference between the original force and remaining reflects the human loss due to various campaigns.

Supporting troops

1828

55,144

51,550

1933

88,072

9027

1939

150,000

Source: (Zaki, 1990) and (Kotb, 2003), p. 116.

Supporting troops included Bedouins, Moroccans and Pashbouzeks (Bosnians). In 1933, the army also included 15 French officers. (Zaki, 1990).

3- The Creation of the Modern Navy: If the creation of a modern army was difficult due to the in-subordination of the Turkish troops, the unruliness of the Mamlukes, and novelty of army discipline to the Egyptian peasants, the creation of a modern navy was even more difficult. As a foreign observer noted: How can you create a navy in a country which had no wood, iron or copper and practically no technicians in shipbuilding or sea-faring? (Panzac, 2012).

The need to create a modern navy was dictated by the need to transport troops and equipment during the Wahabbi wars. To build such vessels, the Pasha commissioned a large shipbuilding facility near Boulaq, Cairo. He scouted the country for suitable trees especially berry trees. He devised a system by which ships would be built in segments, and these are transported to Suez on camelbacks. Once there, ships are assembled, tarred and launched. A camel caravan used for this purpose would contain as many as 10,000 camels (Taiphor, 1986). Such a great feat resulted in building 15 vessels (11 brigs and 4 schooners) in ten months! (Tuson, 1940) and (Mengin, 1823). The need to have a credible fighting navy became evident during the Greek War of Independence. The Greeks had a very effective naval force that they used to harass the Ottomans. Muhammad Ali commissioned the building of brigs and destroyers in many European ports and bought some second-hand ships (Taiphor, 1986), (Khanky, 1948). As England and other European countries were hesitant to build the Pasha a modern fleet, he decided to make the ships inside Egypt. He thought that this would also be cheaper and more speedy, as Egyptian climate is suitable year-round. His renewed efforts to build a Mediterranean fleet has found an advocate in the French Eng. Lefebure de Ciresy (Taiphor, 1986) who arrived in Egypt in 1829 on loan from the French government.⁷ This indefatigable engineer was responsible almost single-handedly in building the Alexandria arsenal, recruit and train the workmen, and supervise design and commissioning. Needless to say that his efforts were met with great resistance from agents of foreign shipbuilders and spies of the Sultan. Nevertheless, in the short span of six years (he returned to France in 1835) he was able to bring the Egyptian Navy to be of a second World rank (Khanky, 1948). According to a recent chronicle, Egypt in 1835 matched the Navy of the U.S. (Houghton, 2019).

The following table shows the development of the naval forces between 1810 and 1833.

Table 2.
Development of Egyptian Navy 1810-1833.

Year
66
15
129
908
198
15960

Source: (Khanky, 1948), pp.338-339, quoted in (Taiphor, 1986).

4- How Much did the Campaigns Cost?: It is very difficult to assign a value to the cost of Muhammad Ali Pasha's various campaigns that stretched over thirty years (1810-40). Given the primitive state of affairs of public finance at this early date, there is no separate account as to the cost of each campaign. There are big differences between the Pasha's estimates and those offered by his foreign observers. The Pasha had a penchant for exaggeration for obvious reasons to deceive his potential enemies as to the power of his state and strength of his finances. He would claim, e.g., to the British Consul, Campbell, that his annual revenue is 1,2 million purses (kees)

⁷ See Father Gerard Viaud (Viaud, 2018) for a popular rendition of the contribution of two other French engineers in building the Egyptian navy.

or LE 60.0 million (Equivalent to US \$ 300.0 million). The Consul had a more realistic estimate of between LE 3.6 and 5.0 million. (Kotb, 2003), Ch. 3.

As his foreign involvements became more ambitious, it is reasonable to expect the cost to go higher. It is estimated that the Greek campaign alone cost Egypt LE 775,000, in addition to the loss of most of the fleet (El-Rafai,1989). By contrast, the cost of earlier Wahabbi Campaign was of a much lower magnitude, between L.E. 150,000- 200,000 (Kotb, 2003). p.122.

Research by the latter author in the Abdin Palace archives enabled him to construct almost a complete series of expenses devoted to military preparedness and campaigns (Kotb, 2003), Ch. 3. All in all, military expenditures tended to consume between 50-60% of the total annual budget expenses. The higher military levels of expenditure were achieved during the Greek and Syrian Campaigns.

IV. How Did the Pasha Raise his Revenues?

1- Improved Agriculture Production: Financing of these various military campaigns would not have been possible through taxes and squeezing more revenue from a stagnant economy. Instead, Muhammad Ali Pasha strove to enhance local economy and increase its resources. In this he deviated from his predecessors as he was cognizant of the fact that a strong army depends on a strong economy. This difference in policies may be attributed to his own upbringing and social background. Another factor may have been the Pasha's ambition to stay in power and create a kingdom for his offspring. Most of his predecessors stayed in power for a few years and were always threatened by removal by the Sultan or mutiny by their fellow Mamlukes.

Muhammad Ali was brought up by a commercial family from the rich Macedonian agriculture region around Kavala (now in Greece) and appreciated the value of land and agriculture development. As Egypt was endowed with rich agriculture and hard working populace, he undertook a very ambitious program of agriculture development and land reclamation. He dug for the first time since time immemorial a number of large irrigation and drainage canals, and later in his reign started to build huge water control barrages on the Nile (Ishida, June 1972). His contemporary (Al-Jabbarti, 1989) noted his great initiative in starting Al-Mahmoudiya Canal (between the port of Alexandria and the Nile) but lamented his use of forced labor.

He also introduced and expanded the production of high-value crops including cotton, indigo and tomatoes (Al-Hitta, and (Rivlin,). Cultivated areas expanded by almost 25%.⁸

In addition to the overall increase of wealth in the country, the Pasha also endeavored to increase the value of his export crops and divert more of this surplus to state coffers. In the following, we discuss some of the main policies adopted by the Pasha to improve revenues.

2- Land Taxes: Since times immemorial, Egyptian peasants were financing the Central Government. In a hydraulic economy, the farmers existence and daily livelihood depended on a strong government that regulates the Nile and distributes fairly its life-giving waters. A delicate balance has to be negotiated: too much taxation can lead the farmer to abandon his land and tax revenues would decline. During the hiatus following the departure of the French from Egypt, 1801, the Ottomans and their Mamluke allies tried to restore the old regime with its many injustices. The Egyptians revolted and were able to instate Muhammad Ali Pasha to the throne.

⁸ There is a dispute as to the extent of horizontal expansion. Rivlin suggests that the improvement in agriculture production was qualitative rather than quantitative (Issawi, 1961).

He therefore had to be careful not to antagonize the populace especially in his first years. On the other hand, a major risk faced by any Ottoman ruler was not being able to pay his soldiers, These feisty soldiers were likely to revolt and possibly attack their master and had no compunction to kill him. So the primary objective of any Ottoman ruler was to keep his soldiers happy. So in the end farmers had to pay!

During his first years, the Pasha had to increase his revenue fast to pay his soldiers and face the threat of the British invasion. He assessed a tax of 800 Para (20 pts.) per feddan (about an English acre or exactly 4200 sq meters of land). Tax was slightly higher for better quality land. In ten years, tax per acre was doubled. (Kotb, 2003), p.61.

The following Figure shows the relationship between land taxes and total revenues. In most years they moved in tandem with land taxes accounting for about 40-50% of total revenues. Land taxes were affected by the level of the Nile flood as good floods would mean good revenues and vice-versa.

Figure I

Development of Total Revenues and Land Taxes, 1817-36.
(in L.E.s)

Source: Modified from sources of Table in (Kotb, 2003), p. 70.

3- Removal of Intermediaries or Tax Collectors: The Pasha's appetite for more revenue was unquenchable. In addition to imposing new taxes, he reformed the tax collection system and had to resort to other ingenious methods. He abolished the old system of tax collection which relied on so-called *Multazims* or tax farmers. These were a caste (mostly Mamlukes) that were given the right to collect taxes from the populace in exchange for advance payments to the Government. Needless to say, these tax collectors were sure to make big profits by squeezing the farmer to pay much more than his due. By abolishing this parasitic class, Muhammad Ali was able to add to budget resources. According to the French Consul, Duhamel, land taxes contributed 16% of budget revenues (Kotb, 2003). The profits from "*Itizam*" was likely to be close to 25-40% of its face value. As the "*Itizam*" (concession system) was somehow competitive and an open bid was conducted, a greedy *Multazim* would be removed if a better price is offered to the Government.

4- Personal or Capitation Tax: One novel source of revenue was the institution of "*ferda*" (capitation tax) on all adult males. But contrary to normal "per caput" taxes known since the Roman times, the Pasha added an element of "ability to pay" in the structure of the tax. Poor individuals were exempted. Artisans and traders would pay 1/12 of their incomes. Also, rich individuals would pay as much as 500 pts. per annum. (Kotb, 2003), p.75. This tax was resisted fiercely as it was not known before. The reaction in Syria was more severe when Ibrahim Pasha tried to apply the same tax during the Egyptian rule (1931-40). The tax was so detested that it caused an open revolt in Palestine and other areas (Belal, 2012), and may have led to the collapse of Egyptian rule in the end.

5- Debasement of the Currency: During wars and other economic crises, many modern day governments resort to printing money. This was not possible under metal currency. The

alternative practiced since the Romans was to debase the currency. The Pasha was no different (Abdallah, 1954).

Around the turn of the 19th Century, Egypt had at least a dozen different coins in circulation. Some were Ottoman, French, Spanish, Austrian and Egyptian. They were in gold, silver, or copper (Serhan, 2002) and (Fahmi, 1976). Due to currency debasement, forgery, shaving and cropping the relationship between these various currencies tended to deviate from the nominal value of each. Also, in some cases, Muhammad Ali Pasha would interfere in the market to impose a price for foreign currencies higher or lower than its metal content. He was willing to pay a higher price for the French "riyal" to keep it inside the country. (Serhan, 2002).

Under the Ottoman system, Egypt was allowed to mint its own coins according to Ottoman specifications. They would be similar to the Turkish coins but with the adage "Minted in Egypt" embossed on them.

In this paper we shall use only four units: a) Egyptian pound (LE), it began to be minted in Egypt in 1836. It is equal to 100 Piastres (pts.). b) The Piastre (pt.) had a much older vintage and it was equal to 40 Para (a copper coin). c) Para or nisf- fadda (Half Silver). d) To facilitate accounts, a measure of money referred to as a Purse or Kees was used. This is only a measure of account equal to 500 pts. This measure was used to calculate budget revenue and expenditure. Normally a "Kees" was taken at face value but later, due to cropping, it was weighed. Finally, due to a bi-metallic currency system, a weight of gold was valued at 15.5 times the weight in silver.

The Pasha would not lose the chance to benefit from this opportunity to debase the currency to finance his projects. The degree of dilution in the value of the currency was phenomenal. Al-Jabbarti (the ever alert observer of Egyptian affairs in the early Nineteenth century) complained of this tendency to corrupt the currency as early as 1225 H (1810 G). He also noted the impact of this debasement on the inflation in the country. He mentions that a dirham (weight) of silk, which used to sell for 2 Paras, rose in price to 15. A *quffah* (sack) of salt rose from 20 Paras to 450, and so on .. (Al-Jabbarti, 1867)⁹. In 1827, during the expensive campaign in Greece, the Pasha ordered the collection of the old silver coins and diluted its value to the rate of 1 to 4 (i.e. he added 3 times its weight in copper) (Kotb, 2003). Needless to say that the value of the Egyptian currency declined against foreign currencies. There was a great resistance to use the new currency, but again the Pasha controlled through the monopoly of foreign trade and control of the Customs and ports the follow of foreign currency into Egypt and determined an artificial exchange rate into Egyptian coins.

The following Figure II shows the "profits" of the Egyptian Mint starting in 1818G (1233). It can be easily shown periods of intense "debasement of currency" corresponded to war years in Sudan, Greece, and Syria.

6- State Monopolies: Finally, the Pasha introduced a rigid system of state-owned industries and monopolies. He also controlled Egyptian exports and imports, and thus garnered huge profits, especially of tobacco exports. His penchant for commercial activities was demonstrated early. He took advantage of the Napoleonic Wars to sell wheat to the British! (Dodwell, 1931) estimates the profit margin in such transactions to be 500% Al-Jabbarti was scornful of this mercantilist

⁹ In the original, Al-Jabbarti used Nisf-fadda, an equivalent of a Para.

approach by the Waly. He noted that the Pasha sold about 200,000 *ardebs*¹⁰ of wheat at 100 pts. per *ardeb* while the local price was only 18pts. He observes drily, however, that the profit margin was definitely higher as the Pasha did not pay anything for these crops as they were paid in lieu of land taxes.

In subsequent years as the Pasha was successful in raising the agriculture production of the country, he was able to gain substantial profits from their exports. The export price for most crops varied between 250-388% of local price in 1830 (Batou, 1991).

Figure II.

Profits from the Cairo Mint: 1818-1842, in L.E.

Source: (Kotb, 2003), Ch. 2.

7- Use of Free Labour: In addition to all of this, he used a system of forced labor under the "corvée" system which reduced the cost of labor in his various huge projects. He was thus able to finish "Al-Mahmouddiya Canal" between the Nile near "Foua" and Alexandria in record time and at a cost of less than STG 200,000. This project supplied Alexandria with Nile water and allowed for its rapid expansion to become the major port of Egypt on the Mediterranean after Damietta.

8- Reform of Public Finance: In addition to extreme efforts to raise public revenues, the Pasha worked hard to reform the administration of public finances. He had an uphill battle in which he realized limited success.

Much of the accounts were obscure and controlled by a close-knit group of Christian Copts. (Dodwell, 1931). There was no budget in the modern sense in which future revenues and expenses are estimated, a priori, or adhered to (Kotb, 2003). Under this confusing and opaque system, there was clear evidence of inefficiencies and possible embezzlement (Dodwell, 1931), p.32. To rectify this situation the Pasha imported many experts in this field and twice tried to establish an Accountancy School to which he invited the children of the same Coptic clerical class. All his efforts were frustrated, although one can be sure that his personal interference, fines and even corporal punishment of treasury officials have reduced the pilfering of the public treasury (Kotb, 2003), Ch.2.

An additional boost in revenues was achieved as he conducted a cadastral survey, in 1814, which enabled him to impose fair land taxes based on "quality" of land and whether land was in the South or North of the country (upper or lower Egypt) (Rivlin, 1961).

Despite the lack of any proper budget in the modern sense, It did seem that Muhammad Ali Pasha, who definitely was a clever and alert administrator and entrepreneur, was leading a rudimentary, but relentless, system of fiscal supervision. He would write to his agents and governors admonishing them to be frugal and would seek less expensive alternatives to any project. His concern for economy extended to micro-managing his new "factories", and industrial enterprises. He, however, was weak to any opportunity to buy machinery and equipment from the West and was aware of the power of money in attracting foreign expertise or buying him access or favors in the Ottoman Court.

In sum, the Pasha used three common simple principles that kept his financial state out of trouble, viz. a) removed intermediaries and collected his taxes directly, b) he also kept a balanced

¹⁰ An "ardeb" is a volume measure for grains equivalent of

budget and spent only what he collected in revenues, c) he abhorred borrowing despite the many inducements by foreign financial houses.

V. Development and Structure of Egypt's Finances:

The study of public finances of Egypt in the first half of the 19th Century poses many challenges. In addition to the general secrecy surrounding state finances, the secret codes used by the then dominant clerical class and confusion in constructing proper financial records, Kotb (2003) in his original M.A. thesis was able to construct a time series for revenues and expenditures for many of the years under study (1810-40). He used multiple unpublished financial archives stored in the National Documents Depository (Dar Al Wathaeq Al-Qawmyia), which included many separate categories of files including archives of the Finance Department, Journals, El-Maestro,... (Kotb, 2003). In this present research some of the Kotb (2003) time series were modified as the Archives of Abdin Palace provided data for more or less than one Hegeri year (354 days), i.e., for some years data were available for eight months, and some years eighteen months. For the original table and comments see (Kotb, 2003), Ch. 4, and p. 174.

Table 3 and Graph 3 summarize those "annual budgets" for selected years. We have standardized the data for some years and rectified the length to 354 days.

Table 3.

Egypt's Government Revenues & Expenditures, 1806-1843.

Selected Years.

Year Annualized 354 Days

Revenue

Expenditure

1221 H (1806/07)

14611871

14128277

1231 H (1815/16)

86901435

86271651

1233 H (1817/18)

99411003

78781307

1235 h (1819/20)

131776993

132764704

1236 H (1820/21)

147791920

144105285

1237 H (1821/22)

149554178

148193074

1238 H (1822/23)

152631909
148987710
1240 H (1824/25)
105056896
98371049
1241 H (1825/26)
103990711
96368310
1243 H (1827/28)
93459376
89776193
1258 H (1842/43)
292662517
217668046

Source: Modified from (Kotb, 2003), p. 175.

From the above Table, we can garner several observations.

First, we note a rapid increase in the size of the budget especially in the first ten full years of his reign (1806- 1816). Total revenues and expenditures increased by five-folds during those critical years where he was consolidating his powers and was engaged in the Wahabbi campaigns. Second, we notice that the budget was almost always in equilibrium, i.e. expenditures were equal or less than revenues. This result is easy to understand because most of the revenues and expenses were the on-cash basis. At the end of the year, the Pasha would spend what is left in the treasury. Third, most of budget revenues were related to the surplus of agriculture production. Good years with a good flood would mean healthy budgets. This connection explains the decline in revenues and expenditure in 1828. In that year the flood was too high and caused major losses of crops and even life-stock The Pasha used this devastating flood as an excuse to apologize for not engaging in the Russo-Ottoman war, upon the invitation of the Sultan. This apology was not well received by the Sultan and was a direct reason for later conflict with the Porte and the first Syrian Campaign. Cf. (Tuson, 1939). Fourth, there was always a problem for the Pasha to raise enough revenue as his military campaign became more ambitious. As many modern day governments, he resorted to inflation as a way to raise revenue. Currency debasement would explain the large leaps in revenues especially during the Greek and Syria campaigns. Concern about the real value of money led many modern researchers to use a more stable foreign currency to gauge the development of Egypt's financing. (Rivlin, 1961), e.g., used the French Riyal, and (Cuno, 1992) used the Austrian Thaler.

Figure 3.

Budget Revenues and Expenditure 1806-1843 in Piastres (pts.),
Selected Years.

V. Summary and Conclusions:

The experiment of Muhammad Ali Pasha is one of the most spectacular examples of locally inspired economic and social development in the history of the Middle-East and Africa in the Nineteenth Century. It was noteworthy to the extent that Japan sent emissaries in the 1870s to learn from this experience.

In this paper, we concentrated on how this inspired leader was able to finance 5 foreign campaigns. His military adventures were in most cases imposed on him by foreign threats, and his desire to strengthen his rule and ensure his country's independence.

Muhammad Ali followed different approaches to grow and balance his finances in a way that enabled him to build his army and navy to satisfy, in the beginning, his Ottoman masters and later to ensure his independence, and expand his realm. The crux of his strategy was to develop the country and resources. Agriculture development was his winning achievement by improving irrigation, the introduction of high-value crops and capturing profits of the foreign trade sector. His industrial ventures were not as successful and had drained resources rather than add to it.

Another approach taken by the Pasha was to squeeze more from the populace and especially farmers and artisans. These war-economy measures are not unlike those followed by modern governments. A third approach followed by the Pasha was to try to reform the administration of public finances. It can't be said that he was wholly successful. He faced resistance by the clerical class, and embezzlement and deception likely continued, albeit at a reduced scale. Two principles that helped save the State was the Pasha's belief in a balanced budget and his refusal to be tempted to borrow money internationally. Unfortunately, his awareness of the trepidations of foreign indebtedness was a lesson soon forgotten by his immediate successors.

Third, the Pasha was a great entrepreneur who applied his talents not only in the area of trade but also in areas of education, training, and administration. He was willing to pay high rewards for new ideas, foreign experts and novel machinery.

But above all, the success of Muhammad Ali Pasha, would not have been possible with the tacit collaboration and perseverance of his subjects. The Egyptian population although reluctant to accept change, was however obedient enough to allow the new experiments to have its day under the sun. This may be one of the main lessons of Muhammad Ali Pasha's experience.

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