

**THE ESTABLISHMENT OF HEAVY
INDUSTRY IN A DEVELOPING
COUNTRY**

A Case Study

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The Egyptian Iron and Steel Co.

In the present paper the establishment of the Iron and Steel Co. is given as a typical case of the emergence of heavy industry in a developing country. It will be noticed from this case, that the establishment of this firm involved decisions of political as well as economic nature. The role of the administrative machinery is also obvious in this process of establishment of heavy industry.

The case is based upon a field survey carried out by the writer.

1. First Steel Mills

The Egyptian steel industry started privately shortly after the 2nd World War on a very modest scale. Its appearance at this time may be attributed to four causes. First, war expenditure led to a boom in construction which increased the steel consumption of the country to an annual average of 300.000 tons against the pre-war average of 100.000 tons ⁽¹⁾. Secondly, the Desert Campaigns resulted in the accumulation of great quantities of scrap, which was cheap and easily transportable⁽²⁾. Thirdly, war expenditure by the allied forces enabled the accu-

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1) U.N. : Economic Development in the Middle East, 1945/54, *op. cit.*

2) U.K. : Board of Trade Annual Report on Egypt, 1947, *op. cit.* p. 41.

mulation of considerable amount of capital, as the following table shows : —

Capital Formation during the War

Year	National Income	Personal Expenditure on consumer goods and services	Net Capital Formation
1939	168	148	8
1940	191	146	33
1941	233	167	51
1942	328	228	76
1943	390	271	78
1944	464	292	132
1945	502	326	122

Source : U.N. op. cit., p. 22.

Finally, the post-war increase in the prices of steel imports acted as a natural protection for local production⁽³⁾.

Demand for steel and the availability of cheap raw materials were the main factors that led to emergence of the industry⁽⁴⁾. Three private companies undertook steel production from scrap. The oldest of the three, the Egyptian Copper Works, was established in 1936 as a joint-stock company. During the war, restriction on imports obliged it to stop production⁽⁵⁾. After the end of the War, the company decided to produce steel from local scrap from the Western Desert, the capital of the company was L.E. 80.000 mostly owned by Egyptians⁽⁶⁾. In 1946, the second company was established : the National Metallic Co., S.A.E., with a capital of L.E. 120.000 to produce steel from

3) U.K. : Board of Trade, 1947, op. cit. p. 26.

4) The total value of basic steel products imports reached over L.E. 13 M in 1942 and continued to increase till it reached over L.E. 22 M. by 1960. (Lecture delivered by Dr. A. Moneim El Kalsouny, Minister of the Economy in the Political Economy Club, Cairo, 1960. Also **Pocket Summary of Statistics** : 4th Edition, Cairo, 1962. pp. 135/7.)

5) Al Messawar Magazine : Special Edition on Metallic Industries, Cairo March, 1963.

6) E.D.O. Annual Report for 1958, op. cit. pp. 148 — 150.

scrap. It had one Siemens Martin Furnace, the first to be seen in the Arab World⁽⁷⁾.

The third company, Delta Steel Co., S.A.E., was established in 1947 with a capital of L.E. 50.000⁽⁸⁾. The three companies had a total capacity of 100,000 tons of steel products annually ; but they produced at half capacity, the rest of Egypt's steel needs being imported at an annual cost of over L.E. 10M.⁽⁹⁾ Under-utilization of capacity was due to the limitations on the supply of scrap. In 1954, the National Bank of Egypt reported: «The industry relying on scrap may have to stop production in a few years since stocks in the country are being consumed»⁽¹⁰⁾.

2. Early Government Efforts

Geological surveys provided evidence that iron ore existed at Aswan, the Baharya Oases and the Eastern desert⁽¹¹⁾. The Aswan ore was the most completely surveyed, because of its location near the Nile and other transport facilities⁽¹²⁾. Its iron content was estimated at from 44% to 50% and it contained no sulphur and little silicon⁽¹³⁾. The surveys were made as part of the ordinary functions of the Ministry of Commerce and Industry (The Geological Administration), and were brought to the attention of Government when it became aware at the end of the War, of the increase in local demand for steel projects and the burdens which this imposed over the country's balance of payments. Government then started investigating the possibility of establishing a steel industry in Egypt, through the Ministry of Commerce and Industry⁽¹⁴⁾. It engaged some

7) U.K. : Board of Trade : op. cit.

8) Undated Pamphlet published by the Delta Steel Company.

9) U.K. Board of Trade, op. cit. Also, Production Council annual Report of 1954, pp. 18 — 19.

10) National Bank of Egypt, econ. B., Vol. XV, No. 1., 1954, p. 12.

11) Files and Records in the Iron and Steel Co.

12) Undated Pamphlet published by the Egyptian Iron and Steel Company: the Egyptian Iron and Steel Company.

13) Files and Records.

14) Ibid.

International advisers such as Loftus Engineering of Pettisborough and the Austrian expert Fritz Schusterchitz⁽¹⁵⁾. Preliminary investigation by these experts led to the emergence of two proposed projects⁽¹⁶⁾. The first project to be located at Aswan would depend upon the utilization of the Aswan Dam electricity and the other to be located at Cairo, would take advantage of the proximity of the metropolitan markets⁽¹⁷⁾. Both involved great business risks particularly as no proof was yet made coke existed in Egypt, and neither could be undertaken without Government's support.

As a result of the political crisis of the post-war era, initial Government efforts were un-coordinated and haphazard. Government was not clear as to its role in industry nor as to its expectations from foreign or local investors. It confined its search for foreign investors to three countries only, Britain, the U.S.A. and France. This was criticised by the Egyptian Chargé D'Affaires at the Hague, who advised the Government to widen its approach⁽¹⁸⁾. Specifically, he pointed out that the U.S.A. had no interest in the establishment of steel projects in the under-developed world and mentioned the recalling by the U.S.A Government of its roving Ambassador, Mr, Edwin Lock after he had expressed his support for the industrialization of the Middle Eastern countries⁽¹⁹⁾. Moreover, for political reasons the Government discharged some British personnel engaged in

15) Ibid.

16) U.K. Board of Trade : 1947, *op. cit.* p. 57.

17) Ibid.

18) Files and Records : The Egyptian Iron and Steel Co.

19) It is very interesting to notice, for example, that the Egyptian Government was hoping to use the point Four Programme for the establishment of steel industry in Egypt. (Files and Records, *op. cit.*) Yet American economists had already explained that this was not among the objects of Point Four : «One of the explicit objectives of our foreign policy», writes Mr. M. Hunter and Mr. W. H. Knowles : «is to maintain and expand foreign raw material supplies... Thus one of the purposes of Point Four Programme is to increase the raw materials output of underdeveloped countries» (**Ten Problems of Point Four**, in *Inter-American Economic Affairs*, Vol. III, No. I., Summer, 1953, p. 75.

research (geological) related to the steel industry, failing to distinguish between its relation with the British Government and those with the British technical personnel in its service. It also demonstrated its lack of clear policy, by discharging from its services the nationals of one of these countries from which it was trying to obtain aid. It left the examination of the projects scattered among several branches of Government, i.e., the Ministry of Commerce and Industry, the Ministry of Public Works and the Foreign Affairs Ministry. It never performed an economic justification for the establishment of steel industry in Egypt, and its entirely political and nationalistic approach could hardly encourage any foreign investors to take interest in the matter⁽²⁰⁾.

3. The Production Council

Soon after its establishment in 1952, the Production Council drew a programme for public expenditure in agriculture, irrigation, utilities and industry. The council put forward the framework of a ten-year programme in which industry was to receive nearly L.E. 40 M out of the total proposed expenditure of over L.E. 330 M⁽²¹⁾. Iron and Steel was one of the projects to which the Council gave priority within the industrial programme. To some extent indeed it was one of few projects to which any previous studies had been made. The Council put forward five reasons in favour of establishing this industry in Egypt⁽²²⁾.

1. The industrialization in Egypt, which the Council announced to be one of its long-run objectives, would demand the establishment of this particular industry.⁽²³⁾

20) Of course it could be argued that if its nationalistic approach was rationalised it could have stimulated some foreign interest in this industry. See later Section 3.

21) Ibid.

22) The production Council : Annual Report of 1953. It should be noticed that the Council's argument is typical of that presented by most developing countries when they established this industry. (Walter Blass: «Steel Mills for Developing Countries» — **Economic and Social studies**, op. cit. pp. 157 — 8).

23) It was held that steel is indispensable for economic development. (A Study of Iron and Steel Industry in Latin America ; U.N. Dept. of Economic Affairs N.Y. 1954, p. 44).

2. To meet local demand for steel which was consuming foreign exchange, greater indigenous production was required.
3. This industry would enable the expansion of the existing steel industry which could depend upon semi-finished steel products as their basic material for production.
4. The industry would meet the needs of the industrial projects which the council was planning to launch in Egypt.
5. This industry symbolises the national independence of the country and the starting of the route to economic development.

From an economic point of view, these arguments were of defective validity. The steel industry being capital-intensive was highly absorptive of the scarce factor of production. Moreover, its construction and running-in period was a very long one⁽²⁴⁾. On the other hand, it could be argued that such heavy and capital-intensive industries would in the long run justify themselves, by laying the basis for a sounder, more diversified and more self-sufficient industrial structure⁽²⁵⁾. We are not concerned in the present paper with the economic soundness of the decision to establish steel industry. However, we must take into consideration that in taking such decision «important non-economic factors have always to be thrown into the balance»⁽²⁶⁾.

4. — Agreement with Demag

The production Council announced the intention to establish an iron and steel factory depending upon the Aswan ore and imported coke with a primary capacity of 210,000 tons of

24) The choice between labour-intensive and capital-intensive projects is analysed in : — A. H. Hanson: *Public Enterprise and Economic Development* — Jan. 1960 pp. 101 — 106.

25) *Ibid.*

26) Typical of these non-economic factors is President Nasser's words in celebrating the opening of the work in the Steel project, viz : « I am happy to see the steel industry in Egypt contrary to what had been said that Egypt is an agrarian country and could never become an industrial one» — of *Annual Report of the Iron and Steel Co., 1955.*

steel in sections, plates and sheets. By-products would include 225,000 tons of slag, 50,000 tons of phosphoric fertilisers and blast furnaces gas to be used for the operating of an electric power station of a capacity of 45,000 KW.⁽²⁷⁾

The project would initially be based upon the working of two basis furnaces with a primary capacity of 250,000 tons.⁽²⁸⁾ The initial production would need 650,000 tons of Aswan ore, 300,000 tons of dolomite and lime-stone (also locally available) and 300,000 tons of imported coke.

The Council invited foreign firms either independently or through local agents to submit their estimates. This was accompanied — as we have seen in Chapter 1, Section iii — with the offering of improved facilities to foreign capital and investments. The council in its communications with foreign firms which showed interest in the project made it clear that preference would be given to offers that involved «foreign participation in finance and in management»⁽²⁹⁾. The facilities offered included access to previous studies made on the project by foreign experts.

Immediately after this announcement was made by the Production Council, several negotiations started⁽³⁰⁾. Active local businessmen negotiated with foreign firms for partnership arrangements. Among these was Engineer Adley Apadeir, a most active member of the Egyptian business community. With other businessmen and some landlords, he formed a joint-stock company, the Egyptian Steel Co., Société d'Etudes. He obtained the backing of a German firm, G.H.H., and submitted a project to the Production Council involving the following proposals : - ⁽³¹⁾

1 — The company should be granted a concession for the

27) The Production Council : Annual Report of 1953/54.

28) Ibid.

29) The Iron and Steel Co., : Files and Records,

30) Ibid.

31) Files and Records.

exploitation of the Aswan ore mines for fifty years at a nominal fee to be decided later by the company and the Government.

2 — It should be exempted from all customs duties and dues on all imported machinery and raw materials.

3 — The Government should grant facilities to enable landlords to participate in the capital by using their compensation Bonds on collateral.

4 — The Government should participate in the capital of the company by at least 1/3 of the total.

5 — The company should be granted unlimited permission to engage foreign personnel and workers.

6 — The Government should supply all the necessary electricity.

The total cost of Engineer Apadeir's project proposed by G.H.H. was some L.E. 16.065.038 of which G.H.H. was to participate to the extent of some L.E. 2 M.⁽³²⁾

Other businessmen acted merely as agents of foreign firms. These included two ex-Prime Ministers, Ali Maher "Pacha" and Hussein Sery "Pacha" who represented respectively Schindler and S.R., a French and a German firm.⁽³³⁾ They submitted two cost estimates which were far higher than that submitted by Engineer Apadeir. The first project (by Schindler) was to cost some L.E. 19.678.440 and the other (by S.R.) would cost some L.E. 18.306.978.

A third type of negotiation was conducted directly with the Council by some German firms.⁽³⁴⁾ The most active of these was Demag, which maintained very efficient communications with the Council through its permanent office at Cairo.⁽³⁵⁾ This firm

32) Ibid.

33) Ibid.

34) Files and Records: The Iron and Steel Co.

35) Ibid.

already had experience of the establishment of steel mills in India, Turkey and Brazil. The Council made it clear that it preferred such direct negotiation with foreign firms and when Demag submitted its cost estimate of L.E. 16.005.676, this seemed attractive.⁽³⁶⁾ Engineer Apadeir in a last attempt to secure the project for his proposed company, brought pressure to bear on the Council officials and on some members of the Government⁽³⁷⁾. He argued that the technical superiority of G.H.H. over Demag was beyond doubt. He claimed that the latter firm had no experience of building or operating steel factories and that it was merely a supplier of advice and machinery. He also argued that by giving the project to this proposed company, the Government would win the confidence of the business community of the country.

Engineer Apadeir not only sent memos and complaints to the Council of officials and to the members of the Military Government; he also invited all the senior members of the Council to visit the factories of G.H.H. in Germany to judge its efficiency themselves and to compare it against that of Demag.

However, the Council announced early in 1954 that it had accepted Demag's offer. Engineer Apadeir then went to the office of the Prime Minister, General Naguib, and from him gained permission to meet Dr. M. A. Selim, a senior member of the Council Board, to discuss with him why Demag's offer was preferred to that of G.H.H.⁽³⁸⁾ At this meeting which took place in January 1954, Dr. Selim pointed out that Demag's offer was much better than all other offers; that this had been the only reason for accepting it; that the Council would seek the support of private investors; and that it had no intention at all of putting out the role of the Egyptian business in economic development.⁽³⁹⁾ Demag's qualifications, he said, were exactly of the type required. The council would like to have a firm to advise on the establishment of the steel factory and to supply the necessary machinery, but not to run the industry except in

36) Ibid.

37) Ibid.

38) Files and Records : The Iron and Steel Co.

39) Ibid.

its initial stages. Additional reasons for accepting Demag's offer were that⁽⁴⁰⁾.

- 1 — Demag's estimates were submitted as final while G.H.H.'s were only provisional.
- 2 — Demag has suggested a maximum cost margin above estimate of 3% while G.H.H. has suggested one of 10%.
- 3 — G.H.H. has asked for at least 2% of the price of machinery to be paid immediately after signing of the agreement; Demag asked for no immediate payment; and,
- 4 — G.H.H. had demanded 2% of the price of any machinery which would not be bough through them, while Demag had made no such stipulation.

In February 1954 an agreement was signed between the Production Council, the Egyptian Government, Demag and the Bank of Industry. Bank Misr was also brought into the agreement, although there is no evidence that it had played any part in the negotiations. The agreement provided for the following⁽⁴¹⁾ : -

- 1 — Demag was to plan the general layout of all main and auxiliary departments, and to act as engineers-in-charge during the installation of machinery. As Consultant engineer, it was to prepare specifications of machinery, material and equipment and examine the various tenders of their supply.
- 2 — Demag was to participate in the capital of the company by 20% of the cost of machinery, up to a maximum of L.E. 2 M, and to be represented in the Board of Directors by one member (during the first four years at least).
- 3 — The Government was to guarantee a 4% return on shares, beginning three years after the establishment of the company; to participate in the initial capital by L.E. 2 M worth of machinery and equipment, and to guarantee the raising of the necessary indigenous finances.

40) Ibid.

41) Files and Records : The Iron and Steel Co.

4 — The Production Council was to contribute at least L.E. 1 M of the capital of the company; the Bank of Industry at least L.E. 1/4 M; and the Bank Misr L.E. 1 M⁽⁴²⁾.

5 — The Egyptian Iron and Steel Co.

On May 1954, the Egyptian Iron and Steel Co., S.A.E. was established⁽⁴³⁾. The Decree of establishment stated the purposes of the company as the following : -

- 1 — To exploit the Aswan ore mines ;
- 2 — To establish and work a steel factory depending upon the Aswan ore ;
- 3 — To trade in the products of the factory;
- 4 — To supervise all the operations related to the above mentioned purposes; and,
- 5 — To undertake all the necessary financial arrangements.

The founders of the company, i.e., the Production Council, the Egyptian Government, Demag of Germany, Bank of Industry and Bank Misr, agreed to contribute in capital as provided in the February agreement. The total capital of the company was to be L.E. 19 M. divided into two million shares of L.E. 1 and 8.5 million shares of L.E. 2. the former shares were to represent Government's initial contribution to the capital of the company.⁽⁴⁴⁾

The company was to be run by a Board of Directors consisting of a maximum of seven members, in which Government would be represented according to its share in capital, like any other share holder. Membership of the Board of Directors was for a period of five years, except in the case of Government representatives, who were to be appointed for three years only.

42) Bank Misr share in capital was to be contributed by the Bank itself (L.E. 1/2) and two of its companies, i.e., Misr Insurance Co., and Misr Spinning and Weaving Co. — (by L.E. 1/4 M each).

43) Decree-Establishment of the Egyptian Iron and Steel Co. Cairo May 1954.

44) Which was paid in real terms as machinery and equipment.

Decisions were to be taken by majority vote. The Board was to be responsible only to a General Assembly.

The General Assembly was to consist of all shareholders. It would debate the annual reports of the Board of Directors and approve them. It would receive from the Board the annual reports and accounts, and elect a chartered accountant to audit the accounts.

The Decree of establishment was like an ordinary joint-stock law apart from the following additional provisions : -

- 1 — The first Board should represent the founders only, viz 3 members to represent Government, 2 to represent the Production Council, and one member to represent each of the other five founders, i.e., the Bank of Industry, the Bank Misr, Misr Insurance Co., Misr Spinning and Weaving Co., Demag.⁽⁴⁵⁾
- 2 — At least 10% of the company's profits were to be transferred to reserve up to the point when reserve reached 50% of the total capital of the company.
- 3 — 5% of the net profits of the company were to be spent in the purchase of Government Bonds.
- 4 — The Chairman of the Board of Directors was always to be appointed with the approval of Government.

According to the law, the company was a joint-stock company. In fact, however, its status was very different. For one thing, public organizations, viz the Government, the Production Council and the Bank of Industry, had a majority on the Board of Directors. This together with the power of veto over the appointment of the Chairman, ensured that Government had the last word, at least during the first three years. Nevertheless, the company was supposed to enjoy the necessary freedom in devising its own internal organization, in managing its own finances and in formulating its own commercial policies. Also, the Board of Directors contained representatives of local business as well as foreign business.

⁴⁵⁾ However, any founder of the company could change its members in the Board of Directors during the period of the first three years without altering this arrangement.