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MODERNIZATION OF THE
SOAP INDUSTRY IN
LEBANON

By

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INTRODUCTION

Industrialization and industrial development are basic aims which Governments try to achieve to build strong economies in their countries. All economies of the free democratic nations depend on the forces of the markets which decide the quality of the product, its design, package, weight, etc. Thus industries receive information, orders and signals from the markets.

The markets of today demand innovation, change, creativity, and newness. These are essentials to the continuation, progress, and success of the industrial and the business-man. They are his high-lights and guideposts in the midst of a dynamic and competitive market.

The soap industry in Lebanon seems not to have coped with the requirements of the market. The industry which one day won great reputation in the local and foreign markets seems to be losing fame and dying slowly.

The writer's choice of the topic, "Modernization of the Soap Industry in Lebanon" is based on his personal

observations regarding the quality of local soap compared to that of foreign imported soap. His research aims at answering three important questions: What has led to the present situation of the soap industry, and what made it lose fame and reputation? What is required to modernize the industry? And whether modernization is feasible or not.

The writer in collecting data and information related to the industry followed the direct interview method. Thus he interviewed and questioned most of soapmakers and factory owners in Lebanon. He also paid long visits to factories where he watched all stages of production and learned most of the business practices. Besides that, publications on the topic in form of books, reports, articles, pamphlets, statistics, etc. were of great help to the writer in accomplishing his research and formulating his opinion about the industry.

The research undertaken covered all sizes of soap-making establishments but consideration has been given to typical establishments (producing from 300-500 tons annually) as they form the greatest number in the industry.

The thesis contains seven chapters. Chapter I includes the history of making soap in general, and the history

of making soap in Lebanon. Chapter II deals with the methods of making soap, and the cost of production for a typical soap producer. Chapter III contains the statistical data on Lebanon imports and exports of soap. Chapter IV presents the structure and the status of the soap industry in Lebanon and sets the requirements for modernization. Chapter V deals with the economic feasibility of modernization. Chapter VI explains problems of modernization. Chapter VII ends the thesis with a conclusion and some recommendations to soapmakers, citizens, and the Government.

Chapter I

Historical Background

A. History of making soap in general ¹

The making of soap as it is practised today in the world is the result of so many discoveries, improvements and much research. According to the great Roman historian, Pliny, the Gauls ² at a time in the past were the original inventors of the art of making soap. Their best soap was nothing but a combination of goats' fat and the ashes of the beech-tree. The Romans subsequently learned the art and introduced it into Italy after their successful invasions of Gaul. The ruins of Pompeii still exhibit to travellers a soap-maker's shop which dates as far back as 200 A.D.

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1. Readings from Alexander Watt, The Art of Soap-Making. (Crosby Lockwood and Son, London, 1926), pp. 1-6.
 2. The world Book Encyclopedia, volume 7, 1959 defines "Gaul" as the English name for the region which the Romans called Gallia. Gaul occupied all the territory now included in France and extended eastward a little beyond the French border. In 390 B.C. Gallia tribes crossed the Alps, swept down through Italy, and sacked and burned Rome. They were driven back, but for a time they held the northern part of the Italian peninsula. In the 200's B.C. Gallia tribes invaded Thrace and Macedonia and finally crossed into Asia Minor. Here they became known as Galatians.

Before soap was known to the ancients they employed the juices of certain plants as detergents, and also fullers-earth which was spread upon the surface of clothes and then stamped by the feet. Sometimes this earth was employed as a cleansing agent in baths, and even up to the beginning of the eighteenth century this system was adopted in Rome by the richest and by persons of the highest distinction.

Italy and Spain had many soap manufactories in the eighth Century, but it was not until five hundred years later that soap manufacture was introduced into France. The exact period at which soap was first manufactured in England is rather uncertain, but it was probably in the fourteenth century. The first soap manufactories in France were established at Marseilles, a city surrounded with natural advantages of soil and climate which help in the production of the raw materials needed in soap-making. The olive-tree flourished in the south of France yielding a fixed oil in great abundance. The shores of the Mediterranean yielded a good supply of maritime plants, from which crude soda was obtained. As time went on Marseilles, with all these advantages, was unable to produce sufficient material to meet demands for her manufacturers; so Italy furnished supplies of olive-oil, while Spain furnished Crude Soda. It was until the beginning of the present century that other oils than olive-oil were

employed in the art. With the introduction of palm-oil and coco-nut oil toilet or fancy soaps were also introduced making an important addition to the soap trade.

In 1622, the first patent for improvements in the manufacture of soap was obtained by Messrs. Jones and Palmer, a summary of this patent reads,

"The misterie, arte, way, and means of makinge of hard soape, comonly called by the name of Venice or Castile soape, without the use of anie fire in the boyling or makinge thereof, and with a materiall comonly called or known by the name of berillia, and the arte, misterie, way and means of makinge of softe soape without the use of fire in the boylinge and makinge thereof." 3

At the beginning of the present century, and after a long period of rude and scientific manipulation, the world was startled by Leblanc's process for the manufacture of soda from common salt, which process was practically developed by the late Mr. James Muspratt, of St. Helen's, near Liverpool. The invention was marvellous. It enhanced the soap industry by making one of its main raw materials easily available, as can be learned from the following quotation:

"The advantages of this invention are far beyond estimation, and although it has since been superseded to a certain extent by the ammonia process,

"it can never be forgotten that its introduction did more for the soap and glass manufacture than any other invention under the Sun." 4

Before the mid of the seventeenth Century and even forty years later soap manufacture was generally conducted without any reference to scientific or chemical principles. Science was not admitted and its teaching were vigorously opposed.

"Except in very rare instances, the aid of science was never consulted, and the operations were frequently carried on by persons absolutely void of even the rudiments of chemical knowledge." 5

However, some manufacturers and large firms exceptional to the general rule (of thumb) dared to admit the teachings of science within their businesses. So they employed chemists who carried analysis and determined the amount of alkali in a given sample of soda ash. Through a series of analysis many saponifiable substances were introduced from time to time, until, at the present day, the lengthy list includes oils and other fatty matters which our fore-fathers would have never dreamt of. Those who opposed science and modernization were satisfied by the profits they got, and were never aware of the future and its requirements. Their

4. Ibid., p. 3.

5. Ibid.

arguments were like, "My soap has a large sale, it yields a good profit; what more can I require?"⁶

Nowadays, by the aid of technology, science, and research, the art of making soap has attained a high standard and has become a full-fledged scientific field of its own in industrial chemistry. Large companies employ within their portals specialized chemists whose job is to analyse substances, experiment on them to see how can they be best used in soap production. Improvements have gone a long way these days. Besides improvements in the Chemistry of soap, much has been done to improve machinery and appliances used in the soap-works. Mechanization has replaced manual labor so that we can see, at present, factories fully automated in the European countries, the United States of America and others.

Progress in the art of making soap lead to a remarkable development of a new product, namely, detergents which seem to compete strongly with soap as a cleansing agent for clothes and dishes. The development of washing machines to replace the old-fashioned method of rubbing clothes by the hands has contributed much to the progress and promotion of the detergent industry.

6. Ibid., p. 4.

B. History of the Soap Industry in Lebanon

The soap industry in Lebanon is one of the oldest. It can be dated as far back as ten centuries ago. It is uncertain whether the Phoenicians taught the art of making soap to the Gauls or not. However, in his book 'Al-Saboon', Mr. Abdullah Adra tends to believe that the soap industry is of an Eastern origin. The Encyclopedia Britanica points out that the Gauls passed the art of making soap to the Germans, and from the latter to the Romans. The link between the Gauls and the Phoenicians is not mentioned. Mr. Adra ascertains that its mention in the Bible for generations before Christ is a clear evidence that the industry existed at that time and that it is of an Eastern origin.⁸

During the Crusades the industry was widely spread in Syria⁹ and had external markets. It was natural for the industry to grow and flourish in Lebanon due to the abundance of olive oil which formed the main raw material in making soap at the time. Most of the olive oil which remained after consumption went into the making of soap.

7. Abdullah Adra, "Al-Saboon" (Press of the Preparatory School, American University of Beirut, 1931), p. 2.

8. Ibid., p. 3.

9. Syria at that time was formed of Lebanon, Palestine and Syria today. Lebanon and Syria of today maintained an economic unity which came to an end in 1950.

It has already been said earlier that towards the end of the twelfth century the first factory for soap was established in France, at a time when the art of making soap in Syria assumed a high position. This allows us to assume that probably the west learned the art of making soap from the Arabs during the zenith of their civilization.

The industry which was a very important one and enjoyed a high status in the past, and which competed with European products in the European market witnessed a decline as far back as 1936 when the industry in Syria and Lebanon started to lose its ground, and hence Syria and Lebanon began to be net importers of soap. Table No. 1 below shows us the trend of exports and imports of soap of Syria and Lebanon between 1936 and 1946.

Table No. 1
Exports and Imports of Soap
for Lebanon and Syria
(Tons)

	: 1936	: 1937	: 1938	: 1944:	1946:
Imports	: 1961	: 2718	: 2182	: 219:	1997:
Exports	: 738	: 993	: 1110	: 227:	1419:
Excess of imports	: 1213	: 1725	: 1072	: - 8:	578:

Source: The Economic Development of Lebanon, A report by Sir Alexander Gibb and Partners, Consulting Engineers, London, 1948, p. 140.

Imports decreased in 1944 as is shown in table No. 1 because importation was stopped during the war. Generally speaking the period between 1936 and 1946 shows that the two countries were net importers of soap. Sir Alexander Gibb comments on the decrease of exports and the increase of imports as follows:

"Locally made soap is mostly consumed on the internal market where its particular qualities are appreciated. Small quantities are only exported. In the past these soaps were renowned in the Middle East, and preferred to rival products which were less suited to local tastes in a number of respects, it is worth considering the reasons for the serious loss of markets:

1. - Competition from foreign soaps is the main cause of the loss of markets, the local producers have failed to modernize their products and satisfy their consumers. The local manufacturers lost their reputation for purity of ingredients by the mixture of oils other than olive. The soap made from olive oil had an unmistakable odor and color that appealed to a wide market in the Middle East. The addition of cheaper oils helped to undermine this market. Except for a few small factories employing more modern methods, the industry is composed of a large number of concerns with the most rudimentary methods of production and are able to turn out one type of soap only.

2. - If the use of other and cheaper oils becomes wide-spread in the country it is probable that the soap making industry will have to use them to an ever increasing degree. In this case, if the industry is to maintain its position, radical improvements in the methods of production must be introduced, and the old type installations will have to give place to factories with modern equipment able to produce all the types and varieties of soap that will be demanded by the market." 9

9. The Economic Development of Lebanon. A report by Sir Alexander Gibb, Consulting Engineers, London, 1948, p. 140.

The discontinuation of the economic unity between Syria and Lebanon in 1950 closed an important market for the soaps of Lebanon. Out of a total production of 5000 tons of soap in Lebanon in 1949, 2000 tons were exported to Syria and 1,560 tons to the other Arab Countries.¹⁰ This indicates that 40 per cent of total production was exported to Syria, or about 57 per cent of total exports went to Syria. Today we can hardly find any soap exports to Syria. A very sad situation for the Lebanese soap industry. Of course, the protection policy that Syria followed after the separation in 1950 led to this tremendous decrease in exports of soap from Lebanon to Syria.

The modern technology, machinery, and methods applied in the art of making soap made those practised by an ordinary Lebanese soap producer antiquated and antedated. Because the Lebanese did not gain from the new inventions and modern sciences, he did not adapt himself to the changes and the requirements of his consumer. He finds himself, today, seriously threatened by the fast advancements that the world have achieved in the industry of soap making. The industry which was once an exporting one in Lebanon lives a period of uncertainty now as to its future.

10. Jubrail Minassa, For a Lebanese Economic Renovation with the Collaboration of Lebanon Overseas (Beyrouth, Lebanese Political Economy Society, 1950), p. 28.

Some soap factories in Lebanon have stopped their activity mainly because they were losing year after year. They did not find markets for their products. They produced the same type of soap they produced years ago and with the same methods until their soap and methods became obsolete and undesirable by the consumer. Thus the Lebanese soap manufacturer was beaten by "Modern soap" which catered to the taste of the consumer.

Chapter II

Methods and Costs of Making Soap in Lebanon

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The writer will discuss the method most generally applicable to soapmakers. A distinction, however, is essential between those who produce soap on a small-scale for their own use and those who produce it for commercial aims.

Some of the villages in Lebanon are still practising the art of making soap as their forefathers did hundreds of years ago. Those villages in each of the districts, Alkora, Marjeoun and Al-Shwayfat where olive trees are abundant and hence one main raw material for making soap, mainly, olive oil is available make soap for their own consumption. The method used in the old times is still prevailing. This method which is the lowest common denominator for nearly all villages producing soap is discussed below.

A. Soap-making in villages

Experts on the topic and men of long experience in making soap in the Lebanese villages described the process as follows:

-
11. Information was obtained by interviews with various manufacturers of soap, by watching different processes and by roaming around in factories.

To produce 40 kgs. of soap two tanks ¹² of olive-oil, ¹³
 6 kgs. of caustic soda, two tanks of water, and about 1 kg.
 of salt are needed.

One tank of water is put in the kettle in which 1 kg. of caustic soda is dissolved. This solution is heated on fire until it boils. Oil is poured over the boiling solution while stirring all the time in one direction. After all of the oil (2 tanks) is poured into the boiling solution, the fire is slowed down. The solution or the mixture is now jelly-like. While fire is slow, the remaining caustic soda is added bit by bit while stirring continuously. When the whole quantity of caustic soda is added, the solution is allowed to manipulate itself-water containing caustic soda precipitates at the bottom of the kettle while soap floats. The soap is milk-like, and at this stage salt is added to the solution. It is sprayed over the solution while stirring goes on. The solution is left on slow fire for about two hours allowing the precipitation of water and impurities. Checking for the correctness of the reaction is done by rubbing a bit of the soap between the fingers. Experts know from rubbing whether the reaction is complete and correct or not.

12. 6 tanks = 100 kgs.

13. Not edible and acidity more than 4%.

The soft soap then is poured on the floor in a wooden fence of nearly the same height on the four sides. It is left for about five hours after which it is cut into cubical pieces by means of a special knife. Then the product is exposed to air and sun to dry out.

The reader is rather acquainted of how soap is being made. He realizes that the whole process - which process is a chemical one - depends upon the experience of the individual, his sight, taste and evaluation. Nothing of the so-called "Scientific approach" is attended to or followed.

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1. Cost of Soap-making in villages

Following are the general prices for the raw materials used:

<u>Raw materials</u>	<u>Price L.L./Kg.</u>
Olive oil	1.50
Caustic soda	.40
Salt	.20
Fuel/hr.	.10

14. These estimates were given by eminent soap makers in Alkora district.

15		<u>L.L.</u>
<u>Cost of an average bulk of 50 kgs.</u>		
2 tanks of oil = 33 1/3 kg. at 1.50	=	50.00
6 kgs. of caustic soda at .40	=	2.40
1 kg. of salt at .20	=	.20
Fuel for 10 hrs. at .10	=	<u>1.00</u>
Total cost	=	<u>53.60</u> *****

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50 kgs. when completely dry will weigh only about 40 kgs.
Therefore cost of production per kilogram is approximately
L.L. 1.30.

When completely dry, this type of soap is usually
sold at 1.75 per kg.

	<u>L.L.</u>
Selling price of 40 kgs. at 1.75	= 70.00
Cost of production	= <u>53.60</u>
Difference between worth and cost	= 16.40

2. Conclusion

The type of soap whose production was discussed above is considered to be of a good quality as it is made of better oils used in the art of making soap. The calculations above show that from an economic point of view, the producer who

15. Cost of labor is not included as there is no opportunity cost and labor is abundant.

16. Water evaporates by time.

is also in most cases the consumer is at an advantage because he is using a good quality soap at a reasonable cost (1.30 L.L. per kg.) which commands a price of L.L. 1.75 in the market. The soap produced by shops and factories and other establishments is sold at an average of L.L. 1.10 per kg., but quality-wise it is lower than that produced for home use.

B. Soap-making in factories, cottages and small shops

The basic process for making soap has not changed much and has been practically the same as it was hundreds of years ago. Oils and fats were saponified with an alkali, and the soap is subsequently sorted out. The major changes in the industry have been in the pretreatment of the fats and oils in actual plant procedure, and in the processing of the finished soap. Thus, a change has been adopted in the type of oil used. Instead of using mainly olive oil the hydrogenation of oils has furnished the soap maker with the new raw materials and substitutes for the older, more expensive fats and oils.

Another important change in raw materials used is that of the alkali. Caustic soda nowadays is the only alkali used. The old method using potassium carbonate, natrun and calcium with caustic soda has been abandoned. The reason for such abandonment is due to the abundance of caustic soda and its better action for cleansing oil and its quicker saponification.

The writer will discuss below the process for making soap as it is practised by a typical Lebanese soap maker. During this discussion the writer will point out the changes and the developments which occurred to the method, the procedure, or the machinery used in soap production.

1. The cold method

The cold method for manufacturing soap does not need or employ heat. Certain oils can be saponified much more easily than others. Nut oil can be easily saponified under the cold method. This method does not allow glycerine and other undesirable materials to separate from made soap. Therefore the boiling process is the method used as it gives better results in soap manufacturing.

* 2. The boiling process

An average bulk of production of 5 tons¹⁷ of soap require 4 tons of oil (usually palm-oil, or coco-nut oil, or a mixture of both); 800 kgs. of caustic soda, 80 kgs. of salt, different amounts of water and heat.

The main part of the apparatus used for making soap is the kettle which is a large tank having a depth of three meters and a diameter of two. Usually, it is made of iron or brass.

17. 1 ton = 1000 kgs.

The kettle is provided with an electric mixer for mixing the solution. In the past a large wooden piece used to be the basic instrument for mixing the solution, therefore the electric mixer in a good number of the existing factories is a development.

Water is added to the empty kettle until it is one third full. Caustic soda is then added to this water slowly and is dissolved completely. Fire ¹⁸ is lighted and the solution is allowed to boil. When boiling takes place oil is added to the solution while stirring continuously. The solution is left on fire to allow complete reaction. After that fire is put off and the solution is allowed to settle and permit the precipitation of water and unsaponifiable material. At this stage soap floats at the upper layers of the solution and is checked by an expert for its chemical reaction by either rubbing a piece of the paste-like substance between the fingers, or by tasting it. If the paste-like substance sticks to fingers, or does not taste right then more soda has to be added and the process is repeated until it checks right or seems so.

At this stage soap is jelly-like and soft. Since the kettle is usually on the first floor of the factory soap is pumped to the second floor where it is moulded. The precipitate at the bottom of the kettle is a solution containing

18. Fire: some use gas, others wood, and very few still use crushed olive seeds.

glycerine. Economically speaking this precipitate is a loss to the soap manufacturer because it is discarded and is not made use of.

The soap is left in the moulding surface until it solidifies after which stamping and cutting is made. Usually, a uniform rope of the same length as the moulding area is prepared after being stained with a red dye. The red dye on the rope is transferred to soap when parallel lines are drawn by means of the rope as it is placed lengthwise and widthwise on the soap area. The space left between each two parallel lines is occupied by four pieces of soap. Each square gives sixteen pieces of soap each of which has a cubical form.

Before cutting soap into bars, each piece is stamped with the owner's mark. The mark characterizes the different types of soap which are in the market.

There has been a considerable improvement in the method of solidifying, moulding, and cutting of soap. Some factories in the suburbs of Beirut have recently abandoned this old method of solidifying, moulding and cutting. They have introduced machinery into their businesses - though it is not highly complicated and automatic, and though manual labor has still to be applied in its usage, it is considered as a slight development in the soap making process.

After soap is cut into pieces it is collected and assembled in piles of pyramidal form with spaces left between pieces to allow the penetration of air and therefore dryness of soap. When the soap is dry it is ready to be grated and polished. Grating and polishing is nothing but scratching the dirt which has stuck to the soap during the manufacturing process. Those who use machinery for cutting gave up the method of polishing by a knife, others still use it.

Soap takes a long time to become completely dry. Some producers expose it to air for a period of three months, others for some days, and those who use machinery for drying the soap leave it on wooden plates for about two days only.

Those who produce toilet soap other than the cubical form wrap their soap with fine cover with the mark of the soap and the name of the producer on it. These are very few not more than three or four in Lebanon.

Generally speaking soap is packed in canvas bags without the least consideration to consequences. (Soap being packed in this manner is ready for marketing.) Some however, use both canvas bags and wooden boxes in packing soap. Others use carton boxes. Their usage depends upon their availability in the manufacturer's factory.

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C. Raw Materials

The raw materials used in making soap are fatty acid oils, caustic soda, salt, water and fire. Oils used are numerous with each type of oil possessing certain characteristics that the other ones do not have. Such oils as olive oil, olive seed oil, cotton seed fatty acid oil, palm fatty acid oil and other fats are used. One of the raw materials mostly used is that of palm fatty acid oil. It is estimated that 70% of total acid oil used is that of palm, 10% of coco-nut, 20% other oils and fats. Olive oil is not used any more as it commands a high price in the market. The olive oil residue, however, is being used but at a very small scale. It is olive oil with high acidity - which oil is not edible and whose acidity is more than 4% which is used in soap making. "It is forbidden to display or sell for food olive oil whose acidity exceeds 4%." ²⁰ This olive oil material produces pretty good soap which commands a high price in the market. Very few still use this type of soap because they cannot afford to buy it. They prefer it to other soaps made from other oils because it has the olive-oil smell, it is clean, and does not irritate the skin. Kernelseed oil is also used, but it is of a much lower

19. Information was obtained from soap producers, Commission Agents and well informed people.

20. Lebanese decree No. 173, January 23, 1938, modified by decree No. 42, February 29, 1940.

quality than the olive oil product. It produces soap with a green color and it is much cheaper than olive oil soaps.

Palm and coco-nut fatty acid oils are the two main oil ingredients employed by the soap industry at present. Their use is common and popular because they are relatively cheap. In some cases, a small amount of tallow fatty acids is used. There are also a number of instances where cottonseed oil soapstock is used. Tallow is incorporated in the formulation to give lathering properties to soap.

The raw materials for toilet soaps production consist almost exclusively of distilled coco-nut and palm oil fatty acids and of olive-oil foots. Sometimes, a small amount of tallow fatty acids is used. Palm and coco-nut fatty acid oils can be used interchangeably, but palm selling at a lower price is being used on a much larger scale. All soapmakers, however, are employing a mix of both palm and coco-nut fatty acid oils. The proportion is usually between 80 - 90% palm and 10 - 20% coco. A mixture of both acid oils is used for the following reasons:

1. Coco-nut and palm fatty acid oils when mixed together give a pleasant smell and odor.
2. Cheaper than using coco-nut fatty acid oil alone.

3. When mixed together coco-nut oil adds to the lathering properties of the soap.
4. The mixture produces soap which resembles to a certain extent soap made from olive oil.
5. Coco-nut oil adds to the hardness of the soap.

Caustic soda is the alkali most commonly used in saponification. It has an excellent detergent property, it is cheap, and abundant. It is used to neutralize the acidity of oil according to a definite chemical reaction.

Some local producers use builders like sodium carbonate, phosphates, sodium silicate and others. These substances increase the alkalinity of soap. They possess detergent properties, and they improve saponification. They improve lathering and leave dirt in suspension. Their employment, however, if not properly done, will result in an adverse action, that is, too much of it becomes harmful to skin and eats up the fabric.²¹ Besides builders, fillers are also used. These are insoluble in water. They give weight to the product, but no saponification. Talcum powder is an example of such fillers.

John L. Elliott, the expert of the Industry Institute in 1956 is known to have recommended the use of builders for soap-makers as is clear from the following quotation:

21. Mr. Adnan Sheik, Technical Analyst, Industry Institute, Beirut, May 14, 1965.

"Also, in order to economize on the cost of raw materials, consideration should be given to the use of builders such as:

- | | | |
|------------------------------|------------|----|
| a. - Sodium silicate | about 3% | |
| b. - Sodium tripolyphosphate | about 3% | 22 |
| c. - Starch | about 2%." | |

The expert also made clear in his report how sodium silicate, starch, and sodium tripolyphosphate could add to the detergent properties of the soap, preserve natural perfume and appearance, contribute to the solubility of the soap in hard water and enable it to produce more abundant suds. Some soapmakers have been found to make use of it without exaggeration as was discussed above. The greater number, however, did not make use of the suggestion either because they lack chemical knowledge or because they are reluctant to change.

"In only one or two instances, however, have soap producers been found to make use of the suggestion. The causes of inertia we may surmise: a complete lack of familiarity with chemical knowledge in the bulk of firms and a reluctance to change reinforced by a fatalistic apathy." 23

Analysis of different local and foreign soaps is given in Chapter IV, table No. 24. Some local soap contained as much as 40% builders and sometimes fillers reached over 50%. This is a tremendous amount. In the case of builders,

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22. John L. Elliott, Report On a Survey of The Soap Industry in Lebanon and Syria. (Beirut: September 1956), p. 11
23. Arthur E. Mills, Private Enterprise in Lebanon. (Beirut: The American University of Beirut, 1959), p. 60.

their excess increases the alkalinity of soap which is very harmful for the skin, and which destroys clothes. Fillers, on the other hand add nothing but weight. The buyer when purchasing a soap containing 50% fillers is buying only half of the amount he thinks he does. When the expert of the Industry Institute recommended the use of builders and fillers he never expected to have such a high percentage.

Cotton-seed oil soapstock is also used, but on a very small and limited scale. It is a cheap by-product of the cotton-seed oil the soap of which is not attractive and of a low quality.

Oils and fats used in soap production are varied and numerous. In Lebanon palm fatty acid oil, coco-nut fatty acid oil, kernel seed oil, oil foots, soapstock oil, olive oil and tallow are used in that order. Prices seem to be the most important determining factor in the use of these oils.

1. Source of Raw Materials

The two main popular fatty acid oils used in soap manufacturing in Lebanon namely, palm and coco-nut fatty acid oils are imported from European countries like Holland, Germany, England, France and Denmark. Large producers import raw materials direct from Europe for their account. Small producers, however, buy from wholesalers in Beirut.

2. Prices of Raw Materials ²⁴

Large soap manufacturers receive price quotations from Commissioners in Beirut who are agents for European producers of oil or caustic soda. Prices of oil have risen up by about 50% for the last two months. ²⁵ Prices vary according to quality. The latter is a measure of the degree of refinement of oils. Distilled and bleached oils command higher prices in the world market. Crude oils being of a lower quality are cheaper than refined and bleached oils. From the two fatty acid oils commonly used in Lebanon in soap manufacturing (palm and coco-nut fatty acid oils) coco-nut is the more expensive. ²⁶ Nine months ago the prices (CIF), Beirut port were :

Palm fatty acid oil	Sterling Pounds 70/ton ²⁷
Coco-nut fatty acid oil	Sterling Pounds 90/ton

Two months ago the prices began rising up. Variation in price is shown below:

Palm fatty acid oil	Sterling Pounds 103-110/ton
Coco-nut fatty acid oil	Sterling Pounds 117-137/ton

24. Information was given by Messrs. Charl Beiruti and Saad Risk, T.G. & Sons, Commissioners, Beirut, May 12, 1965.

25. Since March 1965.

26. Since August 1965.

27. 1 ton = 1000 kgs.

The prices of those materials were affected by world disturbances that took place in Congo and Malasya as those two countries are the two main ones growing palm and coco trees from which the oils discussed are produced. Because of the war in Congo, for example, the supply of palm and coco-nut seeds for oil production was decreased thus raising the world prices for such oils.

Manufacturers of soap were confronted with the rise in price for those materials. Some of them had to resort to lower quality oils to keep their prices the same. Some others - and these are very few - had oil stocks from before. Their costs of production are not changed as they are drawing raw materials stocked from the past, and, therefore, they do not have to change their prices. Such soap producers are competing at present with smaller manufacturers who do not keep oil stocks. This competition will not last long because old stocks will be exhausted within a year and all manufacturers have to restate their goals: either to produce lower quality soap and keep prices the same, or raise prices as a result of the increase in cost of production. Such a course of action is necessitated by the increase in oil prices. If, however, prices resume their previous pattern, then another course of action is to be adopted suitable to the prevailing circumstances.

There has not been much change in the price of caustic soda which is an essential raw material in soapmaking. The price C.I.F. Beirut port of this material varies between L.L. 25 - 30/ton.

It is believed among agents and commissioners in Beirut that the rise in price of fatty acid oils used in soap manufacturing are of a short-run nature and that it will not be long before they resume their previous price quotations.

D. Estimates of Cost of Production of Soap

The cost of making soap varies between wide limits. The variation results from the type of raw materials used, and their prices in the market. One cannot find a standard with regard to the cost of soap production in Lebanon. Almost none of the soapmakers knows what his cost of production is. They all, however, guess and their guesses come right most of the time.

The cost of production today is entirely different from that it was nine months, six months, or two months ago. Prices of raw materials, as has already been discussed before, changed a lot - they have risen up by almost 50% within nine months. The writer will give an estimation of the cost of production of soap for a typical Lebanese

soapmaker. ²⁸ He will show how soap producers were affected by the rise in prices of raw materials. He will, therefore, give two estimates : an estimate of the cost of production nine months ago - when prices of raw materials were lower, and another estimate which reflects the cost of production of making soap today.

1. First Estimate

Nine months ago the prices ²⁹ for palm and coco-nut fatty acid oils were about £ 70 and 90/ton respectively. Caustic soda maintained its price of about £ 3/ton. ³⁰ With these facts given the writer will trace all the costs incurred in making soap plus the costs incurred in marketing it. The writer makes all his calculations on the basis of L.L. 8.50 ³¹ for a sterling pound.

Palm fatty acid oil cost (C.I.F.) per ton:

$$70 \times 8.50 = 595 \text{ L.L./ton}$$

Coco-nut fatty acid oil cost (C.I.F.) per ton:

$$90 \times 8.50 = 765 \text{ L.L./ton.}$$

28. A typical Lebanese soapmaker produces 400 tons of soap. The majority of medium size producers center around this figure.

29. Since August 1965.

30. Prices are C.I.F., Beirut port.

31. The market price for the sterling.

These acid oils being imported for industrial purpose are exempted from custom duties. There are, however, other costs incurred such as:

Municipality fee	2 1/2% of value
Unloading	L.L. 6/ton
Port fee	L.L. 10/ton

The buyer will also pay for transportation of the goods from the port to his factory. The average cost depends upon distance. For example, to transport the goods from Beirut Port to the Beirut area, or Sidon, or Tripoli it costs L.L. 2, 4, 5 per ton respectively.

Besides that the buyer has to pay for the clearing of the goods. It is estimated that the clearing agent receives about L.L. 3/ton.

A typical Lebanese soapmaker would use :

- 70% palm fatty acid oil
- 20% coco-nut fatty acid oil
- 10% kernel seed olive oil

Kernel seed oil is locally produced and is normally sold at L.P. 60 per kilogram.

Before the writer proceeds in his estimation of the cost of production he would like to present a complete list

of the annual overhead cost of a typical soapmaker excluding depreciation :

<u>Item</u>	<u>L.L.</u>
Rent	5000.00
Interest	5000.00
Indirect labor	4000.00
Electricity	400.00
Water	200.00
Telephone	150.00
Municipality fees	<u>300.00</u>
Total overhead	<u>15050.00</u> =====

The typical soapmaker discussed and from whom the above information was collected has an annual production of 400 tons (400,000 kilograms). He normally uses the fatty acid oils as the basis for production, thus he employs 1800 kilograms of fatty acid oils to produce about 2340 kilograms of soap which is a normal bulk of production for him.

a. Raw Materials

When municipality, unloading, port and transportation fees are added to CIF prices of palm and coco fatty acid oils their prices at the factory become L.L. 630 and 830/ton respectively. Table No. 2 shows the total cost of oil used in a normal bulk of production of 2340 kilograms (2.34 tons).

Table No. 2

Cost of oils

Raw materials	Percentage	Weight in kgs.	Cost/kg. P.L.	Total cost L.L.
Palm fatty acid oil	70	1260	63	793.80
Coco-nut fatty acid oil	20	360	83	298.80
Kernel seed oil	10	180	60	108.00
Total	100	1800	-	1200.60

To manufacture 1800 kgs. of fatty acid oils, a typical soapmaker uses about 360 kgs. of caustic soda and about 36 kgs. of salt. Therefore the following table summarizes the total cost of raw materials incorporated in producing a bulk of about 2340 kgs. of soap.

Table No. 3

Cost of raw materials

<u>Item</u>	<u>L.L.</u>
Total cost of oil	1200.60
Cost of caustic soda 360 kgs. at 30 P.L.	108.00
Cost of 36 kgs. of salt at 25 P.L.	9.00
Fuel	<u>20.00</u>
Total cost of raw materials	1337.60

b. Direct Labor

The following are the costs incurred by applying direct labor in producing 2340 kgs. of soap:

Table No. 4
Direct Labor Cost

<u>Direct labor</u>	<u>L.L.</u>
Manufacturing	70.00
Drying	20.00
Cutting	25.00
Cleaning	20.00
Grating	10.00
Filling in sacks	<u>20.00</u>
	165.00

c. Overhead

The overhead cost for producing a bulk of 2340 kgs. of soap is estimated on the basis of the soapmaker's annual production, namely, 400 tons. Total annual overhead cost as calculated previously (see page 30) is 15,050 L.L. - 2340 kgs. are equivalent to 2.34 tons. Therefore, overhead cost incurred in producing 2.34 tons is L.L. 87.90.³²

$$32. \quad \frac{15,050}{400} \times 2.34 = 87.90$$

; d. Other costs

33

Marketing costs are estimated at L.L. 20 per ton. To market 2.34 tons it takes L.L. 46.80. The owner, who is also the manager of the factory has an opportunity cost of about L.L. 12,000 annually. This figure is rather high, but is acceptable because the factory owner works almost all day. His bad debts reach L.L. 2,000 per year. With all this information we are able to calculate rate of return on invested capital and yearly profits. This will be given in the next section under profitability and rate of return. Here, however, the writer would like to give the total cost of making and selling 2.34 tons of soap for the producer already considered. In other words a summation of such costs is given below in table No. 5.

Table No. 5

Total Cost

Item	L.L.
Raw materials	1337.60
Direct labor	165.00
Overhead	87.90
Marketing	<u>46.80</u>
Total cost	1637.30

33. Marketing costs do not include advertising as most of the soapmakers do not advertise their products.

The above figures reflect a peculiar phenomena in this type of business. Marketing costs are negligible with respect to total cost. This is really due to the lack of advertising, sales promotion and other important marketing functions like packing, packaging and handling. With the exception of two or three soapmakers who are spending large sums on advertising specially T.V. advertising, it can be said that this important marketing function is neglected.

2. Second Estimate

This cost estimate is done on the basis of present prices of raw materials. It has already been said that prices of palm and coco-nut fatty acid oils have increased almost 50% within nine months. Their present prices are given on page (25). Estimate No. 2 will differ from No. 1 in only prices of palm and coco-nut fatty acid oils; as there has been no noticeable change in any other factor involved in the cost of production or marketing. Therefore, with 50% increase in prices the cost of raw materials becomes as is given in table No. 6 below;

Table No. 6

Cost of Raw Materials

Raw Materials	Percentage	Weight in kgs.	Cost/kg. P.L.	Total cost L.L.
Palm fatty acid oil	70	1260	94.50	1190.70
Coco-nut fatty acid oil	20	360	120.00	432.00
Kernel seed oil	<u>10</u>	<u>180</u>	<u>60.00</u>	<u>108.00</u>
Total	100	1800	-	1730.70

The above table shows that total cost of oil raw materials has risen from L.L. 1200.60 ³⁴ to L.L. 1730.70. Direct overhead and marketing costs had no significant change. Therefore, the following table sums up the total cost incurred in producing and marketing 2.34 tons of soap for a typical soapmaker:

Table No. 7

Total cost

Item	L.L.
Oil raw materials	1730.70
Caustic soda and salt	117.00
Direct labor	165.00
Overhead	87.90
Marketing	<u>46.80</u>
Total cost	2147.40

34. See table No. 2.

Here the writer will estimate the profitability and the rate of return on invested capital using the first and second estimates of the cost of production of the typical soapmaker.

E. Profitability and Rate of Return

The selling price of soap did not change much as a result of the rise in the prices of raw materials mainly because soapmakers had to compete among themselves. Some of them had to resort to lower quality of fatty acid oils, but those who had a stock could continue selling at the same price. For the type of soap whose cost has been estimated commanded a wholesale price of P.L. 80 per kilogram. These days due to the rise in the prices of raw materials it is normally sold at a wholesale price of P.L. 85 per kilogram.

	<u>L.L.</u>
Sales 2340 kgs. at 80	1872.00
Less: total cost of production and marketing	<u>1637.30</u>
Gross profit	234.70 *****

The gross profit generated in selling 2340 kgs. of soap would be L.L. 234.70 as is shown above. From the total annual production of 400 tons about 50 tons stay in inventory. However, annual production fluctuates in such a manner that the average inventory in a year stays at around 50 tons. Therefore, the gross profit generated in selling 350 tons would be :

Annual gross profit: $\frac{350 \times 234.70}{2.34} =$ L.L. 35,104.70

To arrive at net profit, there are other costs that have to be deducted :

		<u>L.L.</u>
Gross profit:		35,104.70
Less: Owner's opportunity cost:	12,000.00	
Bad debts	2,000.00	
Depreciation	<u>10,000.00</u>	24,000.00
Net profit before tax:		11,104.70
Less: Income Tax (5%)		<u>1,055.35</u>
Net profit after tax		<u>10,049.35</u> -----

Rate of Return

Rate of return = $\frac{\text{Net profit}}{\text{Invested capital}}$

Invested capital is estimated at L.L. 100,000.

Therefore, rate of return is :

$\frac{10,049.35}{100,000} = 10.04\%$

To calculate profitability and rate of return with costs of the second estimate in mind by following the same procedure discussed above one arrives at a loss instead of a net profit, and therefore a negative rate of return. This is

the case with most soapmakers at present. They do business on the hope that prices of raw materials will resume their previous pattern. As has already been noted, some of them resort to lower quality of raw materials to continue their existence. Resort to such an action would not enable the existence of a soapmaker for long. This is a short-run existence which the writer believes affects the future image of the soap.

It is however, the general feeling among soapmakers, agents, and commissioners in Beirut that prices will resume their old quotations and the rise in prices is temporary and will not last long.

A typical soapmaker is generating an average rate of return on invested capital of about 10.04% which is quite normal for the industry.

Chapter III

Statistical Analysis and Implications

The writer will try to analyse the Lebanese imports and exports of soap. The analysis of imports aims at determining their quantities, qualities and origin. This analysis helps us to formulate an opinion about the consumers needs and tastes for soap. Exports are analysed to help us see the extent of the foreign market.

At the same time the analysis of Lebanese imports and exports of soap is carried, implications of such analysis are discussed.

A. Imports of soap

Imports of soap for three consecutive years 1961, 1962 énd 1963 are given below in table No. 8 on the next page:

Table No. 8

Lebanese imports of soap by country
 (Value in L.L. and weight in kilograms) ++

Country	1960		1961		1962	
	Weight	Value	Weight	Value	Weight	Value
Great Britain	324,121	402,104	477,100	484,370	426,532	519,163
Syria	1,714	1,895	1,835	3,243	5,946	5,975
Switzerland	239	413	374	847	183	556
France	66,674	84,439	41,895	54,813	14,421	12,933
Jordan	11,179	13,110	13,767	15,700	13,287	16,554
United States	243,315	382,994	364,653	613,195	344,222	501,734
West Germany	13,481	22,797	3,603	8,819	32,999	54,917
Italy	1,300	2,132	225	858	6,388	9,476
Belgium	1,759	3,920	2,325	4,309	575	1,015
Egypt	1,122	1,385	-	-	-	-
Holland	18,420	26,838	10,476	10,698	4,458	9,578
Greece	213	1,127	425	675	-	-
Hungary	6,616	5,720	5,180	4,599	2,304	2,500
Bolonia	4,710	2,140	-	-	-	-
Romania	-	-	1,071	570	3,600	2,685
Saudi Arabia	-	-	50	100	-	-
Palestine	-	-	3,402	2,400	-	-
Australia	-	-	220	446	180	500
Algeria	-	-	6,480	9,410	-	-
Austria	-	-	191	260	-	-
Spain	-	-	-	-	83	380
East Germany	-	-	-	-	1,788	1,896
Japan	-	-	-	-	865	2,088
Pakistan	-	-	-	-	1,285	560
Total	694,863	960,924	935,270	1,218,529	859,116	1,142,510

Source: Statistiques du Commerce Extérieure, Conseil Supérieur des Douanes, République Libanaise, Beyrouth 1960, 1961, 1962.

++ It is explained that while imports are paid for by foreign currencies purchased in the free market, the above figures represent their value at the official exchange rates which are lower in Lebanon than the free market rates, the actual value of imports is larger than the above figures. (Official exchange rate: \$ 1.00 = 2.20 L.L.) (Market exchange rate: \$ 1.00 = 3.00-3.10 L.L. on the average).

1. Quantity imported

Imports of soap into Lebanon in 1960 amounted to 694,863 kilograms with a total value of L.L. 960,924. In 1961, imports increased both quantity and value-wise - 933,274 kilograms valued at L.L. 1,212,312. In 1962, a slight drop occurred in imports compared to imports of 1961, but compared with 1960 imports they maintained an increase. It can be learned from these figures that the quantity imported is increasing.

To reach a total figure of soap available in the Lebanese market during each of the years 1960, 1961, 1962 local production of soap must be added to total imports of each year. Comparison of importation and production of soap will make one understand the relation between production and importation.

Table No. 9
Comparison of importation
and production of soap
(Weight in tons)

Year	35 Production	36 Importation	Total
1960	8,520	695	9215
1961	9,325	930	9255
1962	7,390	860	8250

35. See Chapter IV, table No. 23.

36. Import figures are rounded to the nearest 5.

Consumption does not match production. It is estimated that for every 400 tons of production 50 tons stay in inventory. With this information we can estimate consumption of locally produced soap. The following table gives an estimate of yearly produced soap. The following table gives an estimate of yearly consumption of locally produced soap:

Table No. 10
Production, Inventory
and consumption of soap
(weight in tons)

Year	Production and inventory	Inventory ³⁷	Consumption of local soap
1960	9520	1065	7455
1961	9585	1198	8387
1962	8588	1073	7515

From the above table we can make a comparison between consumption of foreign and local soaps. The assumption is that imports of one year are consumed during that year.

Table No. 11
Consumption of local and foreign soaps
(weight in tons)

Year	Local	Foreign	Total consumption
1960	7455	695	8150
1961	8387	930	9317
1962	7515	860	8375

37. Calculated on the basis of 50 tons of inventory for every 400 tons of production.

The above table suggests that there is a growing tendency towards consumption of foreign soaps. Probably it can be better understood when we compare local and foreign soap consumption percentage-wise:

Table No. 12
Comparison of consumption of local and
foreign soap percentage-wise

Year	Local plus foreign %	Local %	Foreign %
1960	100	91.6	8.4
1961	100	90.1	9.9
1962	100	89.7	10.3

It can be seen in the above table that while consumption of locally produced soap decreases, consumption of foreign soaps increases.

2. Quality of imports

A breakdown of total imports already discussed is needed to see the sort of soap being imported and upon our findings we can formulate an idea about the consumer preferences. Below is a table containing a breakdown of imports of soap into Lebanon during the years 1960, 1961 and 1962.

Table No. 13

A breakdown of imports of soap
(Weight in kgs. Value in L.L.)

Kind	1960		1961		1962	
	<u>Weight</u>	<u>Value</u>	<u>Weight</u>	<u>Value</u>	<u>Weight</u>	<u>Value</u>
1. Soap in the form of plates, granules, liquid not perfumed	26.230	34.551	18.807	24.340	12.205	13.631
2. Toilet or perfumed soap	564.577	819.031	730.564	1085.030	668.397	954.733
3. Medicinal and disinfectant soap	87.446	97.368	164.442	86.278	144.726	151.665
4. Other soap	16.446	9.974	21.457	22.881	33.788	32.842

Source: Statistiques du Commerce Extérieur, Conseil Supérieur des Douanes, République Libanaise, Beyrouth, 1960, 1961, 1962.

It is clear that in absolute terms, toilet or perfumed soap forms the main item of imports of soap. For example in 1961, total imports amounted to 935.270 kilograms out of which 730.564 kilograms are toilet or perfumed soap. Value-wise all imports of that year reached a value of 1.218.529 L.L. with toilet soap reaching 1.085.030 L.L. which is about 90% of total value. To see the relation percentage-wise a table is given below:

Table No. 14
A percentage breakdown of
total imports by kind

Kind	1960		1961		1962	
	Wt.%	value %	Wt.%	value %	Wt.%	value %
1. Soap in the form of plates, granules, liquid not perfumed	4	3.5	2	2	1.5	1.5
2. Toilet or perfumed soap	81.5	85	79.5	90	79.5	83.5
3. Medicinal and Disinfectant soap	12	10.5	17	7	16	12.5
4. Other soap	2.5	1	1.5	1	3	2.5
Total	100.0	100.00	100.00	100.00	100.00	100.00

Source: Derived from table No. 13.

It can be seen from the above percentage breakdown that toilet or perfumed soap has a higher percentage for value, while other soaps exhibit the opposite characteristic. This means that toilet or perfumed soap attains a higher value per unit than other soaps do.

3. Origin of imports

Most of the Lebanese imports of soap are from the United States of America and Great Britain. The two countries together supply Lebanon with more than 85% of its imports of soap. The following table shows how much of each of those two countries is imported:

Table No. 15
Comparison of imports by country
(Weight in kgs., value in L.L.)

Country	1960		1961		1962	
	<u>Weight</u>	<u>value</u>	<u>Weight</u>	<u>value</u>	<u>Weight</u>	<u>value</u>
U.S.A.	243.315	392.994	364.653	613.195	344.220	501.630
Britain	324.121	402.064	477.100	484.370	426.531	519.163
Others	146.427	165.826	93.517	120.964	88.365	121.717
Total	694.863	960.924	935.270	1218.529	859.116	1142.510

Source: Derived from table No. 8.

It can be learned from the above table that the greatest quantity is being imported from Great Britain. Value-wise imports from the United States of America are greatest. This implies that those imported from the U.S.A. cost more than those imported from Great Britain. To see this relation in a more comprehensive manner the table below gives the facts of the above table in a percentage form.

Table No. 16
Comparison of imports by country
Percentage-wise

Country	1960		1961		1962	
	<u>Wt. %</u>	<u>Value %</u>	<u>Wt. %</u>	<u>Value %</u>	<u>Wt. %</u>	<u>Value %</u>
U.S.A.	35	42	39	50	40	43
Britain	44	41	51	40	49	45
Others	21	17	10	10	11	12
Total	100	100	100	100	100	100

Source: Derived from table No. 15.

The above table shows that while imports from Great Britain are greater quantity-wise than imports from the U.S.A., the reverse is true about their cost. For example 44 per cent of total imports were from Great Britain in 1960 with a C.I.F. cost of 41 per cent of total cost of imports of that year. Imports

of the U.S.A., on the other hand, amounted to 35 per cent of total imports for the same year, but reached a cost of 42 per cent of the total cost of imports for that year.

Since imports from the U.S.A. and Great Britain form 85 - 90 per cent of total imports of soap into Lebanon, a breakdown of imports by kind from the U.S.A. is given in table No. 17. When a breakdown of imports by kind from Great Britain is also made it would nearly give a similar conclusion.

Table No. 17
 A breakdown of imports from U. S. A.
 by kind

(Wt. in kilograms, value L.L.)

Kind	1960		1961		1962	
	<u>Wt.</u>	<u>value</u>	<u>Wt.</u>	<u>value</u>	<u>Wt.</u>	<u>value</u>
Soap in the form of plates, granules, liquid not perfumed	3,955	7,080	2,320	4,770	1,340	2,284
Toilet or perfumed soap	239,360	385,914	360,011	602,553	342,071	496,575
Medicinal and disinfectant soap	-	-	2,322	5,872	809	2,771
Other soap	-	-	-	-	-	-
Total	243,315	392,994	364,653	613,950	344,220	501,630

Source: Statistiques du Commerce Extérieur Conseil Supérieur des Douanes, République Libanaise, Beyrouth, 1960, 1961, 1962.

The above breakdown enables us to see the sort of soap being imported. Out of total imports of 243.315 kilograms from the U.S.A. in 1960, 239.360 kilograms are toilet or perfumed soap. This is about 99 per cent. When a similar breakdown is done for imports of soap from Great Britain we will also find nearly the same structure. It is toilet or perfumed soap which constitutes an overwhelming share of Lebanon imports of soap.

B. Exports of soap

It was shown in Chapter I that Lebanon was at one time an exporting country for soap. Today, Lebanon imports large sums of soap with toilet or perfumed soap forming the greatest proportion of total imports. Exports are negligible and they will be discussed under exports to other countries.

1. Exports to Syria

Syria at one time formed the main external market for the Lebanese soap. It was in 1950, when the economic unity between Syria and Lebanon came to end, that Lebanon lost a big market for its soap products. For example, in 1948 Lebanon exports of soap to Syria amounted to about 5000 tons. Today Lebanon exports of soap do not exceed 13 tons annually. This

38. Jubrail Minassa, op. cit., p. 23.

is a tremendous decrease.

2. Exports to other countries

The following table summarizes Lebanon exports of soap for three years: 1960, 1961 and 1962.

Table No. 18

Exports of Lebanese soap
(Weight in kgs., value in L.L.)

Country	1960		1961		1962	
	Wt.	Value	Wt.	value	Wt.	value
Turkey	1,350	1,500	600	650	-	-
Iraq	25	56	-	-	-	-
Saudi Arabia	5,965	11,212	1,135	1,797	3,021	5,335
Kuwait	3,630	5,470	11,188	7,901	2,425	3,225
Canada	15	50	-	-	-	-
U.S.A.	-	-	20	70	-	-
Qota	-	-	275	300	364	1,005
Afghanistan	-	-	45	200	180	270
Mexico	-	-	35	100	-	-
Palestine	-	-	-	-	5,650	2,900
West Germany	-	-	-	-	430	1,500
Total	11,247	18,910	13,298	11,018	12,070	14,235

Source: Statistiques du Commerce Extérieur, Conseil Supérieur des Douanes République Libanaise, Beyrouth 1960, 1961, 1962.

Lebanon exports of soap as it is seen in the above table go mainly to Saudi Arabia and Kuwait. In 1962, the UNRWA in Lebanon exported about five hundred tons of local soap for the Palestinian refugees in Gaza.

3. Why a Decrease in exports?

We have seen that Syria before 1950 formed a large external market for Lebanese soap. After the economic unity between Syria and Lebanon came to an end the Syrian market was closed in the face of Lebanese soap. This - already said - led to a tremendous decrease in exports of soap. This is only probably one reason for the drop in exports. Other reasons like obsolete methods of production, lack of diversification of products, lack of scientific application in manufacturing and control made the soap industry lose its status, which at one time was highly recognized. The most important reason for the decrease in exports was competition. The Lebanese soapmakers did not adapt themselves to the tastes of consumers both internally and externally. Not only there has been a decrease in exports due to the severe competition being discussed, but a large share of the local market has been lost to foreign soap products.

C. Impact of Detergents on Soap

The introduction of detergents for cleansing purposes formed the main competitor for the soap products. The reason

for this competition is that both detergents and soap could be used interchangeably sometimes. The usage of detergents has become popular. Most probably they will continue to be so for the following reasons:

1. The better brands of detergents, such as one finds in Lebanon are decidedly better "cleansers" for the family wash for many household needs than are general soap products.
2. Detergents work more rapidly and thoroughly in hot, cold, and hard water than do soaps.
3. Since the use of detergents enables the family wash to be completed more rapidly, they save time.
4. Bar soap, such as laundry or "all purpose", is not suitable for use in most washing machines. Therefore, a certain amount of the traditional market for soap is automatically lost as more families reach the economic position where they can afford washing machines.
5. In most cases, the detergents are advertised strongly and persuasively. In general, the distributors of detergents do a good job of displaying them in the stores and over-all promotion with the dealers. In

contrast, most of the local soap producers have failed completely to establish their brand names or to advertise and promote their product in any way.³⁹

In view of the above reasons we can see why detergents have manifested themselves as cleansing agents. The Lebanese soapmakers had to meet this manifestation with the introduction of flaked or powdered soap which does not possess the properties of the synthetic detergents as they are preferred by the average consumer.

1. Imports of Detergents

Imports of detergents into Lebanon nearly maintained themselves between 1960 and 1962 as the table below shows:

39. John L. Elliot, op. cit., pp. 9-10.

Table No. 19
Imports of Detergents by country
(Wt. in kilograms, value in LL)

Country	1960		1961		1962	
	Wt.	value	Wt.	value	Wt.	value
East Germany	3,000	920	-	-	3,000	912
West Germany	465,778	232,672	478,996	251,301	266,616	136,344
Italy	10,000	4,952	64,247	25,624	511,719	307,550
Great Britain	173,289	171,817	463,947	324,522	257,616	91,754
Belgium	33,100	22,996	362,475	137,567	411,173	144,083
Syria	47,350	38,385	40,850	32,905	-	-
Switzerland	25	176	492	1,006	5,000	2,572
France	5,452	5,043	9,730	6,591	5,225	6,171
Canada	21,274	19,300	7,008	5,905	-	-
Holland	64	196	12,851	8,694	6,917	7,798
U.S.A.	998,803	1050,738	114,151	105,145	73,671	92,829
Australia	379	340	-	-	-	-
Denmark	-	-	1,633	1,500	-	-
Isouge	-	-	-	-	2,500	1,286
Checkoslovakia	-	-	-	-	10,000	4,224
Total	1758,514	1547,534	1556,380	900,760	1553,437	795,523

Source: Statistiques du Commerce Extérieur, Conseil Supérieur des Douanes, République Libanaise, Beyrouth, 1960, 1961, 1962.

The greater part of imports of detergents was from the U.S.A. Out of a total of 1,758,514 kilograms 998.803 kilograms were imported from U.S.A. This seems to be a particular year since this quantity is not maintained in 1961 or 1962. The above table shows that West Germany in general is the largest exporter of detergents into Lebanon. What is of interest to us in the above table is that unlike imports of soap, imports of detergents are mainly from West Germany, Great Britain, Belgium and the U.S.A. Lebanon, for example, is importing L.L. 232,672 worth of detergents from West Germany, while it imports only L.L. 22,797 worth of soap. The implication one would get from this fact is that either the German detergents are better or cheaper or both, or they are being promoted in the Lebanese market. Most well informed people, believe that it is the last reason, and so does the writer.

2. Comments on Detergents

Detergents are synthesized mostly from Alkyl-Aryl Sulphonate, Sodium Carbonates, Sodium Phosphates, Sodium Silicate, Sodium Silicates and Carboxy-methyl Cellulose. These form the lowest common denominator for all detergents with Alkyl-Aryl Sulphonates forming the largest proportion in the product.⁴⁰ Therefore, one can see that due to so many chemicals

40. Information obtained from Mr. Adnan Elshaik, technician, Industry Institute, Beirut.

applied in manufacturing detergents, the latter possess nearly all properties needed by family wash. Silicates and carbonates have both a cleansing and a lathering function, Carboxy-methyl Cellulose is a suspending agent for dirt and soil and so on. The result is quicker action and better cleansing, but the fact remains that detergents due to all salt contents act on the fabric more easily than flaked or powdered soaps do.

D. Exports of Detergents

To meet the increasing demand for detergents some small factories have been recently established for the production of detergents. Though they are facing technical problems and manufacturing difficulties, it is hoped that they can overcome them and gain experience.

Like exports of soap, exports of detergents are negligible. The small amount being exported goes mainly to Kuwait. Though exports of detergents are not big, but they have been increasing continuously. The table below shows exports of detergents by country.

Table No. 20
Exports of Detergents
(Wt. in kgs., value L.L.)

Country	1960		1961		1962	
	Wt.	Value	Wt.	value	Wt.	value
France	20	50	-	-	-	-
Turkey	98	168	2,469	1,203	-	-
Iran	65	125	-	-	-	-
Saudi Arabia	100	150	98	150	11,270	18,570
Kuwait	1,200	700	3,930	3,475	34,398	40,270
Italy	-	-	85	150	-	-
Cyprus	-	-	2,340	2,700	-	-
Palestine	-	-	1,800	1,444	-	-
Afghanistan	-	-	-	-	90	368
Great Britain	-	-	-	-	65	50
Sudan	-	-	-	-	30	34
Liberia	-	-	-	-	400	350
Jordan	-	-	-	-	1,491	10,186
U.S.A.	-	-	-	-	120	250
Total	1,483	1,243	10,722	9,122	56,864	70,078

Source: Statistiques du Commerce Ewtérieur, Conseil Supérieur des Douanes, République Libanaise, Beyrouth, 1960, 1961, 1962.

Exports of detergents have jumped from 1,483 kilograms in 1960 to 56,864 kilograms in 1962. If we consider 1962 only we find out that Kuwait, Saudi Arabia and Jordan are the biggest importers of the Lebanese detergents. This implies that there is a market for both soap and detergents in these countries. This market, however, needs effort and planning to be explored and exploited.

E. Conclusion

The statistical analysis we have already done made six things clear to us:

1. Lebanese imports of soap are increasing year after year.
2. Perfumed or toilet soap form the largest proportion of yearly imports of soap - on the average they form 85 - 90 per cent of total imports.
3. Consumption of foreign soaps compared to consumption of local soaps is increasing at a continuous rate.
4. About 90 per cent of total soap imported is British and American.
5. Detergents form a major competitor for soap as both could be used interchangeably as cleansing agents.
6. Lebanon exports of soap are negligible, and therefore Lebanon is a net importer of soap.

Chapter IV

Modernization of the Soap Industry

A. Structure of the Soap Industry

In Lebanon there are about 62 factories and establishments for soapmaking, with a total capital of about L.L. 4 million, employing a total of 389 workers.³⁸ Out of the sixty two factories and establishments producing soap in Lebanon only 47 submitted their production figures to the Ministry of National Economy. Production for those forty seven factories amounted to 16,876 tons in 1963. This figure contains perfumed soap in the amount of 194 tons, powdered or flaked soap in the amount of 1,763 tons.³⁹

Nine out of the sixty two factories are in Beirut and its suburbs. About thirty are in Tripoli and the rest are distributed in Alshouf, the Mountains, and in South Lebanon. The size of these factories vary a great deal and it can be best understood from the production figure and the number of workers in each. Production in those factories ranges between 50 and 3000 tons per year and workers between 3 and 30 in a

38. The figures represent the statistics of the Ministry of National Economy for 1963.

39. Figures were obtained from the Statistics Dept., Ministry of National Economy, Beirut, Lebanon, April 19, 1965.

factory.

Only one of these factories is a company. Their business is either personal or family type. The manager is in most cases the owner, the accountant and the purchaser. In other words, he is the management force. The majority have no idea about costs and they do not keep accounts. Therefore, the business is, so to speak, run without any planning.

None of these factories operate all the year round. All of them are working under capacity. Very few of them have diversified their products. Most of them produce the "all purpose." ⁴⁰ soap. They suffer from competition among themselves and from foreign soap. Their production shows wide variation. The following table shows total production for four years:

Table No. 21
Production of soap between 1960 - 1963
in Lebanon

Year	No. of establishments	No. submitting production figures	Production in tons
1960	71	65	7,800
1961	74	60	6,768
1962	54	41	7,390
1963	62	47	16,876

Source: Ministry of National Economy, Statistics Dept., Beirut, Lebanon, 1962.

40. Arthur E. Mills, *op. cit.*, p. 60.

The above table clearly presents the wide variation of production between 1960 and 1963. Out of 71 factories registered at the National Economy in 1960 only 65 submitted their production figures as shown above in table No. 21. The average production for a factory is 120 tons (Divide 7,800 by 65). Therefore if the average production for a factory is 120, the 71 factories would give an average production of 8,520 tons ($\frac{71 \times 7,800}{65}$). Therefore, to arrive at an average production figure for the years 1961, 1962 and 1963, one will follow the same procedure used to calculate the average production for 1960 already discussed.

Table No. 22

Total average production of soap in
Lebanon

Year	Average production per factory in tons	⁴¹ No. of estab- lishments	Total average production in tons
1960	120	71	8,520
1961	112.8	74	8,347.20
1962	180.2	54	9,730.80
1963	380.3	62	23,578.60

Source: Derived from table No. 21.

41. Obtained by dividing production by number of establishments submitting figures of production in table No. 21.

The variation in production between 1960 and 1963 is tremendous. It is not due to a rise in consumption of soap, or a cut in exports. It is mainly due to the haphazard planning for production. The soapmakers have rarely estimated demand for years to come on sound business principles. They depend on their feelings, hunches, and rule of thumb. The main reason for this rise in the production figure of 1963 is due to the fact that the olive-oil season was good. The abundance of olive-oil greatly enhanced soap production.

B. Status of the Soap Industry

Generally speaking, the soap factories consist mainly of an old-style kettle in the basement of the building. Heating the kettle contents is done either by burning crushed olive seeds, wood or by means of fuels, namely, gas. The second floor of the factory is normally reserved for drying and storing soap. Most of the factories give an expression of unpleasant atmosphere to the visitor. They are extremely dirty and with little or no mechanical equipment. There are a few exceptions to this, but the majority are still not mechanized though they have introduced the mechanical mixer to replace the old-fashioned way of stirring and mixing the solution by means of a wooden thick stick. Some of those who produce flaked or powdered soap use a small roller but the typical producer of powdered soap still uses the hand crushing method.

Those few factories which produce toilet soaps have rollers, moulding boxes, cutters and stamping machines. Such factories have also flaking machines and mixers. The exceptions to the above are two or three factories which have mechanized their manufacturing operations, but unfortunately, it cannot be said that they are fully-mechanized as labor is still applied at some stages of the manufacturing process when machinery could do it more efficiently.

Soap-makers in Lebanon are passive with respect to quick changes demanded by such industries like soap. Their passivity is due to the fact that they are untrained in the science underlying their activity. Their inability to carry out materials, better processes, and alternative products is the main cause of their passivity. They still operate with the limited knowledge they inherited from their grandfathers - the traditional unmechanized process of producing the "all purpose" soap. Their products are not diversified because of lack of trained personnel or mainly chemists who through research and analysis are supposed to keep the factory up-to-date and well informed about the science of the industry. Because the soap-makers are intensely individualistic and their business is either a personal or family possession, they do not allow outside collaboration, and therefore there is no

fund of new ideas and dynamic attitudes to stir them out of their mental rigidity.⁴²

The industry suffers from competition within itself and from imported goods. It suffers from changing tastes and from the appearance of new products competitive with the old, and, above all, it has suffered from the loss of its traditional Syrian market after 1950.⁴³ Foreign competitors are at an advantage because they have easy access to the chemical knowledge vital to the dynamic industries such as the soap industry. Foreigners have adopted newer types of "mix" in raw materials used and they are always searching for better and less costly blends of raw materials to be employed in the soap production. The Lebanese ordinary soap-maker is ignorant of the science used by western factories - especially that field of technology employed in blending raw materials - which aims at better products with less costs.

The Lebanese soap-maker's passivity in marketing is not less than his passivity in production or his mental rigidity in relation to new methods of production. Generally speaking, only very few have recently begun advertising their products.

42. Arthur E. Mills, op. cit., p. 60.

43. In 1950 the Economic Unity between Lebanon and Syria came to an end.

On the whole there is no retail display of the products, and no representatives of soapmakers visiting retail stores and helping them in soliciting business and selling soap. The same criticism can be extended to salesmanship and sales promotion. No effort is done on them. Foreign competitors or rivals know the value of aggressive salesmanship in a highly competitive market like the Lebanese one. To a local soapmaker and to one of the biggest producers it is a loss to spend money and effort on salesmanship. "I save the money and sell at a lower cost", he said, "and therefore I sell more".

A consultant to the Industry Institute, Professor John Elliott in his report about the soap industry in Lebanon in 1956 suggested marketing soap by piece rather than by kilogram. He believes that economies could be obtained by selling the soap by the case or sack (if this method of packaging is preferred) with so many pieces of soap per case or sack. If this procedure is followed, the soap must be dried until there is no further possibility of dehydration and loss of weight. Selling by kilo ties up the manufacturer's money that could be used to better advantage.⁴⁴

The above suggestion has not been adopted or even tried. Producers still sell by the kilo. This is due to their passivity,

44. John L. Elliott, op. cit., p. 11.

mental rigidity and lack of adaptability to change and their fear from anything new. The following quotation from Arthur Mills supports the writer's opinion:

"In spite of the obvious attraction of the suggestion, nothing has yet been done to implement it. This may be due to the mental rigidity referred to above. It may, on the other hand, be due to the prudent caution of producers and dealers who fear the repercussions on demand that might occur if consumers were to be offered the soap in a form less hard than has been the custom. To them it might no longer be the same product." 45

The writer believes that selling by piece could not be implemented if uniformity and standardization were absent. The shape, the size and the contents of the soap do not conform to a homogeneous set standard. This does not give confidence to the consumer to buy by piece. He thinks of weight as his "standard". Poor standardization, lack of uniformity are not due to raw materials, but to absence of standard specifications, quality identification, grading and control. Absence of definition and testing do not ensure that the said characteristics of the product are correct. With all these essential requirements for producing and marketing soap being absent the industry does not enjoy the status the Western industries do.

45. Arthur E. Mills, op. cit., p. 62.

To summarize it can be said that methods of production are obsolete, marketing is traditional and backward. Management and organization are not attended to, and, therefore, the industry is not considered 'modern'.

C. Requirements of Modernization

1. Modern Equipment and machinery

Modernization of the soap industry requires the replacement of the obsolete method of production with the new modern ways and means of production which employ modern equipment and machinery. The latter will help the industry to:

1. Produce a homogenous product.
2. Produce a larger quantity per unit time.
3. Cut down large scale production costs.
4. Turn out a certain bulk of production in a shorter time. Thus drying soap, for example, under the present method of production takes from two to four weeks time. Modern equipment and machinery makes instantaneous drying by virtue of high temperature and low pressure.
5. Solve inventory problems, thus with modern equipment and machinery the manufacturer will be able to adjust his production according to demand much more easily than with the present method of production.

6. Minimize waste products. The use of modern equipment and machinery will allow the producer to make use of the lye left at the end of production. Modern equipment and machinery turns out from this lye an important chemical by-product which is glycerine.

2. Modern Layout

"A plant layout is a plan of facilities, utilities, work station, and services for a particular plant or factory that will provide a flow of materials, and parts from the receipt of the raw materials to the shipment of the finished product." 46

There is nothing of the so called modern layout in the soap industry of Lebanon. Most of soapmakers exhibit nearly the same structure and layout in manufacturing places. It has already been said in another place how one floor of the factory, for example, is reserved for production, that is, for the kettle and the raw materials and how the second floor is kept for cutting, drying and grating soap. Such a plant layout is necessitated by the production methods used. When operations have to be mechanized a new set up and a modern layout consistent with the objectives and the facilities of the plant, have to be adopted.

46. American Management Association, Modern Approaches To Production Planning and Control. (Haddon Craftsmen, Scranton, p. 1960), pp. 108-109.

"Efficiency and cost of operation are greatly influenced by the flow of work through the plant. A good layout establishes logical routing and makes it possible for materials to flow with a minimum of handling. It reduces backtracking and brings parts and components to final assembly as required. A poor layout on the other hand, can be perpetual headache to the manufacturing organization." 47

Probably the first and most important thing in executing a plan for modernization is layout. Before anything else is being done careful planning for the most efficient layout must be undertaken. Once the layout is set and construction finished it would be very difficult to reconstruct due to an error found in the planning of the layout. Every consideration must be given to the type of work and layout is expected to accomplish and promote at present and in the future.

A layout is usually prepared by special layout engineers or the works engineer consulting with members of management, people concerned and responsible for production, organization, and manufacturing to obtain the requisite information necessary for planning a modern layout. A complete plant layout includes:

1. Floor plan of all areas.
2. Size and location of all machines, equipment, laydown space, receiving department, storerooms, tool cribs, shipping department, lavatories, aisles, roadways, etc...

47. Ibid., p. 108.

3. Utilities required for each piece of equipment.
4. Flow of material through the plant and through each department.
5. Handling facilities specified for the plant's operation.

It should not be surprising to say that several soap-makers in Lebanon due to the limited space they have in their factories rent special places - away from the factory for drying. No doubt that such an action embodies an additional cost for moving the product from the factory to another place. Such an action, of course, is an outcome of the inadequate, poor layout of factories inherited from very old times. Soap-makers have not seriously considered the impact of existing plant layout on their business as a whole. In most of the cases they have not done so, because they seem to be ignorant of the basic philosophy of plant layout on one hand, and because they are reluctant to change on the other.

3. Modern Management Organization

This subject has intrigued some of the greatest thinkers of the past. The great philosopher, Aristotle, concerned himself with the ideal structure of society, Van Clausewitz

48. Ibid., p. 109.

with the ideal structure of an army, and St. Thomas Aquinas with the ideal structure for the church. Each of these great men concerned himself with the proper organizational framework which allows masses of people to work harmoniously and efficiently with each other.

Mechanization of the world has given rise to even more emphasis on organization.

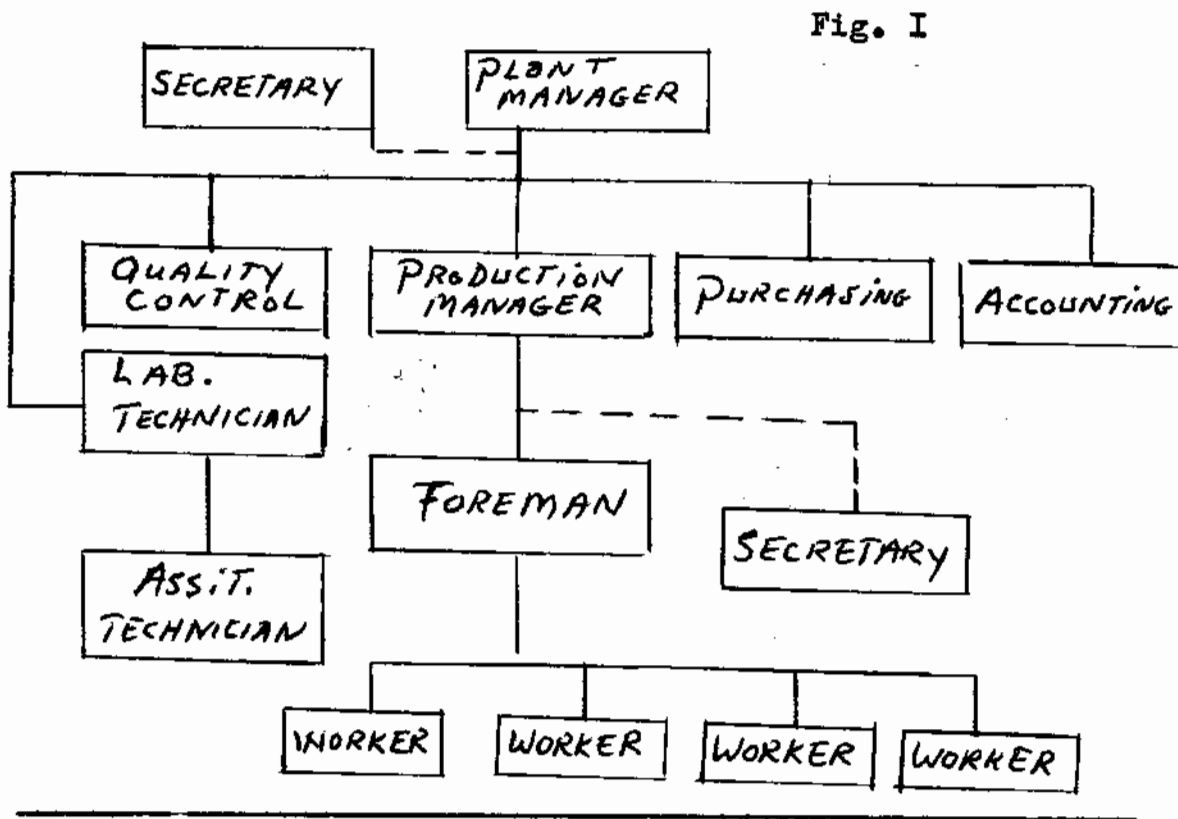
"Human History started out unstructured in a Garden, perhaps it will end in a society of ant hill. With the coming of the machine, society seems to feel especially called on to arrange itself in structural patterns through which it hopes to duplicate the efficiency of a Machine." 49

The purpose of an organizational plan is to provide an arrangement for the working relationships between individuals performing different activities. Proper organization of individuals promotes efficiency and helps in the achievement of objectives sought. Of course, the type of business, its size, location of the plant, and the philosophy of the key people in the business determine the organizational set up of the business. For example, the organization of the human resources in a soap factory is different from the organization of people in a business consulting firm, but essentially in both businesses,

49. Ferdinand F. Mauser, Modern Marketing Management. (McGraw-Hill Book Company, Inc., New York 1961), p. 290.

the aim is to enhance cooperation of individuals working together and avoid overlapping of authority and responsibility. To ensure smooth running of work organization should reflect specifically and clearly the relationship that must exist between individuals on both the horizontal and the vertical levels.

If modernization of the soap industry is feasible, it cannot survive without implementing all facets of modernization to allow the industry the benefits of today's achievements. A suggested organization for a medium size⁵⁰ soap factory is given below.



50. Medium size is taken to mean 1200 tons of production annually.

The organization given above will not fulfil its mission without clearly defining the task to be undertaken by each of those organized. Each must be assigned a definite clear task and is told of what is expected of him. He is to be informed of his relationship with those who are in the same department he is and with those in other departments. The laboratory technician, for example, will be assigned the task of analysing the product and reporting the results to his boss. He could also be asked to consult with the purchasing man as to the type of raw materials bought in so far as their chemical nature and composition is concerned. It has already been pointed out earlier that work according to specialization is non-existent among soapmakers in Lebanon. Therefore, if ever modernization has to take place it will not be sufficient to instal modern equipment and machinery, but rather installing the right person in the right place will give more strength and purpose to the whole organization.

4. A Dynamic Thinking and a Scientific Approach

To modernize and be always modern requires a change in attitude, a change from "a passive attitude" to a dynamic, active one. It is of paramount importance especially to those working in a chemical industry like soap to be all the time keen and alert of the changes that take place in their industry in

the world. They are also invited to make change by developing new ideas for new products. Experience has shown that dynamism and change are essential for success and survival. New products must be designed and manufactured and introduced into the market. In other words dynamism requires product planning. Originating, evaluating, and developing new product ideas and adapting those showing most promise so that they can be profitably exploited in the market place is product planning. The technological advance and progressive competition made it clear that there is no status quo in business. A business either goes forward by expanding, or it falls into oblivion. Thus growth through new-product development has become a paramount business goal. Executives intent on mastering the requirements for growth quickly found the answer primarily in new-product development. This activity, now recognized as crucial, could no longer be left to chance; there was a need for a systematic way of dealing with the future.⁵¹

Launching new products is very important to the continuation and success of a business, it enables it to:

1. Increase its share of the market.
2. Stabilize sales by diversifying products.

51. Ferdinand F. Mauser, op. cit., p. 197.

3. Replace products that have diminishing profit possibilities.
4. Maintain an image of alertness in the eyes of the business's own sales force, dealers, and customers.
5. Frequently make use of idle plant capacity.
6. Make markets more secure by developing end products utilizing the business's own basic materials.

We have seen that the soap industry in Lebanon was doomed to its present status. Passivity and mental rigidity of those in the industry coupled with traditional thinking and lack of scientific approach formed the framework of the soap industry in general. The "all purpose" soap with the sophistication of the consumer, and new products is obsolete. The Lebanese soap-maker should have done the obsolescence rather than the European or the American. Planned obsolescence is a basic marketing strategy which must be exploited by the manufacturer himself, if possible, or it will come from others to the disadvantage of the first.

5. Use of Modern Marketing Methods

Marketing today assumes a high status and has been

52. Ibid., p. 199.

recently recognized as the economic and social giant that is awakening. It has been looked upon as the key to solving many of the free world's problems. The burden of responsibility for full employment, for example, rests on shoulders of the marketer.

"Production problems have succumbed to research and technological assault to such a degree that full employment of the country's labor and capital food, drink, clothing, housing, and recreational facilities for all citizens." 53

The point is that production can do the job only when the market demands all that is possible to produce.

The above statement has shown us that marketing is the basis for mass production. To put the same thing in another way we might say

"Marketing is the sum of all things done to sell the product, be it advertising, packaging, providing, parking space or customer services!" 54

Marketing begins before production and is a continuous process. When the chemist determines the alkalinity percentage in a piece of soap, he has the consumer in mind. The product would not sell if it does not meet the taste of the consumer. Today in

53. Ibid., pp. 4 - 5.

54. Ibid., p. 6.

the advent of technology and abundance, products cannot be sold without refinement. Today selling of products is linked to service and convenience offered by the seller. For example, the customer likes a maintenance policy with a television set, credit terms with clothing purchases, quick-drying and odorless qualities in paints, quick lathering of soaps, parking facilities adjacent to the shopping center he patronizes. The soap industry in Lebanon seems not to have understood what marketing could do for it. It was only until recently that two or three brands of soap began to be advertised. With the exception of one or two soap-makers who seem to try to apply marketing methods and techniques on a limited scale, it can be said that such marketing tools as advertising, packaging, packing, standardization, salesmanship, etc. have not been applied.

The study of the soap industry in Lebanon reveals anxiety of most of the soapmakers in the face of foreign competition. They have done nearly nothing in way of marketing to meet competition. They sell a homogeneous product in a market where competition is very keen. They have to cater to dealers who sell what they can at the prevailing prices. Due to the homogeneity of their products, advertising and sales promotion does not help them individually. Advertising would help a lot if products were differentiated. Generally speaking, the manufacturer does not have representatives that visit retail

stores and help them in displaying the products. The typical soapmaker does not advertise his products to the consumer through common media of newspapers, cinemas, magazines, television, etc... His reluctance to do so leaves the market free for foreign competition to apply such modern means of marketing.

The expert of the industry institute who studied the soap industry in Lebanon in 1956 pointed out that though some of the large factory owners try to diversify their product range, to brand their goods and to discover products to compete with the imported ones, he found as inert an attitude towards marketing among them as among the cottage producers.

a. Advertising

This important function of marketing is rather non-existent in the Lebanese soap industry. It seems that most of those in the business lack information on what advertising can do for them. It is unfortunate that such a tool is not employed in cultivating demand.

"Advertising popularizes. Advertising is the specialized activity seeking to make consumers aware of the company along with the products and services it has to sell!" 55

Most of the soapmakers when asked about their reluctance

55. Ibid., p. 98.

to advertise answered by saying that advertising is an expensive business function, the worth of which is not easily realized. They prefer to sell at a lower cost than to advertise. To them this looks pretty simple.

Advertising costs must be compared and related to what advertising does. They should not be thought of as merely costs that do not give a return. Advertising creates demand for the product, with more demand, more sales, more production, less production cost per unit. This is only one phase of effective advertising. To be able to stand in the face of competition and ensure a growing market for his products, the Lebanese soap-maker must not think in terms of how much is spent for advertising, but rather of what it can do.

"In the last analysis, the question of how much is spent for advertising is not particularly significant. It is much more important to inquire about how much we get for what we spend. A student of the subject should be more interested in the values that are added by advertising in relation to expenditures therefor than in costs per se." 56

Thus it is absurd to think of advertising as mere cost without any return or profit. The ultimate objective of all advertising effort is to expand sales and increase profit. 57

56. Theodor N. Backman and William R. Davidson Marketing. (The Ronald Press Company, New York, 1962), p. 434.

57. Ralph S. Alexander and Ross M. Gunningham. Industrial Marketing (Richard D. Irwin, Inc., Homewood, Illinois, 1961), p. 433.

b. Packaging

Another important marketing aspect neglected by the typical Lebanese soap manufacturer is that of packaging. When soap is packaged it is protected, and it gives the consumer an image of the product. The package when properly designed attracts the attention of the consumer. Preselling usually is done by advertising in advance of the consumer's visit to the store.

"The package identifies itself to the consumer who relates it to past advertising and finds it agreeably familiar. The package is the final characterization of the product to the consumer. Success of the entire merchandising, advertising and product-development activity hinges on whether the package does the end-selling job effectively!" 58

The prevailing idea among producers of soap in Lebanon is that packaging increases the cost of selling the product. Again they think of the cost of packaging as being without any return, and therefore they avoid it by not packaging their soaps. It is true that packaging does not add to the intrinsic value of the product itself, yet it has its value in the attraction it makes to consumers to buy the product.

It should be added that it is not enough to package and stop there, but rather continuous check on whether the

58. Ferdinand F. Mauser, op. cit., p. 128.

package is fulfilling what is intended is necessary and change of package is essential.

The following table No. 23 shows opinions of American executives on why changes in packaging are made.

Table No. 23

Why packaging changes are made

This percentage lists as major reasons for change

Item	Increased sales appeal	Standardized packages	Reduced packaging costs	Reduced product damage	Reduced Handling cost
Fabricate consumer products	51	20	33	28	29
Food, drugs and chemicals	82	13	33	18	42
Clothing and textiles	56	12	6	13	21
Machinery and industrial supplies	35	24	45	27	44
All respondents	52	19	36	25	38

Source: Dun's Review and Modern Industry, September, 1957.

they believe that changing the package increases sales appeal. This supports the suggestion already made that packaging promotes sales.

Changes in packaging should not be done for change's sake. Changing packages must be seen and done through its contribution to long-range profits. There should be adequate justification for adopting new packages or making changes in the old. Changes in packaging have to be made to overcome competition and obsolescence, and to meet the consumer's changing taste.

"New packaging materials, changing needs of the market, competitive action, and technical advances in packaging equipment all place current packaging under a continual threat of obsolescence or threaten that products will be relegated to positions of inferiority because of a competitor's superior packaging." 59

Most producers of soap in Lebanon have not made use of packaging and those very few who attempted, failed to realize the importance of keeping pace with competitors by introducing changes in the packages - changes that fulfilled the customer's demand.

C. Standardization and Control

Article IV of the Lebanese standards law stipulates:

59. Ibid., p. 145.

"Standards approved and published by the Lebanese standards Institution shall in essence be considered voluntary. However, for reasons of safety, health, or the national interest, the Government may, upon approval by the Standards Council and the recommendation of the Minister of National Economy, render mandatory a specific national standard by a decree enacted in the Council of Ministers." 60

With regard to soap particularly, there has been no mandatory standard, or an official standard that soap products ought to conform to. Because of the absence of such a standard there are wide variations in the contents of soap. The Lebanese Standards Institution (LIBNOR) published last year a standard for soap. A standard which defines the characteristics of the product obtained by the action of sodium or potassium alkalies on fats and oils of vegetable or animal origin. In order that the reader will be able to follow our comments and criticism of soap contents afterwards an exact reproduction of the standard suggested by the Lebanese Standards Institution is given below:

Soap Standard

1. Scope

This standard defines the characteristics of the product obtained by the action of sodium or potassium alkalies on fats and oils of vegetable or animal origin.

60. Lebanese Standards Law, Section I, Article IV.
Promulgated on July 23, 1962.

2. Classification

Soaps, as defined by this standard, shall be classified as follows :

1. Toilet soap
2. Olive-oil soap
3. Household soap
4. Powdered or flaked soap.

3. Composition

Soap shall have one of the following compositions:

3 - 1 Toilet soap

Dry soap	88.00% minimum
Water	11.00% maximum
Free acidity or alkalinity	0.10% maximum
Alcohol-insolubles	0.10% maximum

3 - 2 Olive-oil soap

Dry soap	85.00% minimum
Water	14.00% maximum
Free acidity or alkalinity	0.20% maximum
Water-insolubles	0.20% maximum
Alcohol insolubles	0.50% maximum

3 - 3 Household soap

Dry soap	78.00% minimum
Water	18.00% maximum
Free acidity or alkalinity	0.30% maximum
Water insolubles	0.50% maximum
Alcohol insolubles	4.00% maximum

3 - 4 Powdered or flaked soap

Dry soap	84.00% minimum
Water	12.00% maximum
Free acidity or alkalinity	0.30% maximum
Water insolubles	0.50% maximum
Alcohol insolubles	4.00% maximum

3 - 5 The appellation "soap" applies only to products that conform to the compositions indicated above. Cleansing products made of a mixture of soap and other detergents should be labelled accordingly and cannot be sold except under a different appellation, such as "washing powder".

3 - 6 "Olive-oil soap" shall indicate soap made from fats wherein the olive oil content is not less than 90%.

3 - 7 In view of the fact that the water-content of soap diminishes with time, the percentages of the other constituents as indicated above will therefore increase in proportion to the decrease in water content.

The Technical Division of the Industry Institute in Beirut carried in the summer of 1961 analysis for thirty six brands of soap, two of which are English, one American, and two French the results of the analysis are given below:

Table No. 24
Results of analysis of samples of soap
(Numbers show the percentage ratio)

Origin	Dry soap	Water	Alcohol insolubles	Water insolubles	Free Acidity or alkalinity
Local	83.8	3.4	12.8	11.9	0.41
Local	82.5	3.61	13.9	13.2	0.46
Local	40.2	7.1	52.7	25.8	0.22
Local	88.9	4.6	6.5	5.5	0.38
Local	84.0	14.6	1.4	1.0	0.53
Local	85.9	12.2	1.9	0.5	0.16
Local	86.0	11.8	2.2	0.9	0.23
Local	85.7	11.4	2.9	0.9	0.15
Local	86.8	10.9	2.3	0.9	0.17
Local	84.8	13.2	2.0	0.6	0.22
Local	87.1	11.3	1.6	0.2	0.26
Local	86.8	10.3	2.9	0.9	0.16
Local	87.9	9.7	2.4	0.6	0.27
Local	86.6	11.8	1.6	0.4	0.21
Local	86.7	10.8	2.5	0.9	0.22
Local	84.6	13.7	1.7	0.6	0.14
Local	79.3	14.9	5.8	1.2	0.04
Local	77.3	9.3	13.4	10.8	0.14
Local	88.6	9.8	1.6	0.2	0.21
Local	82.8	15.8	1.4	0.4	0.18
Local	87.5	8.3	4.2	1.4	0.12
Local	86.9	11.2	1.9	0.8	0.18
Local	87.8	9.3	2.9	2.1	0.34
Local	86.4	10.5	3.1	1.6	0.34
Local	84.7	13.8	1.5	0.7	0.32
Local toilet	91.1	8.8	0.07	0.01	0.08
Local toilet	91.3	8.6	0.07	0.01	0.07
Local toilet	93.6	6.3	0.06	0.01	0.08
Local toilet	90.4	9.5	0.1	0.01	0.08
Local toilet	87.6	12.3	0.1	0.05	0.20
Local toilet	89.9	9.7	0.4	0.09	0.20
Znglish toilet	90.7	9.3	0.03	0.01	0.07
English toilet	92.7	7.2	0.07	0.01	0.07
American "	90.4	9.5	0.1	0.01	0.08
French toilet	95.1	4.8	0.1	0.01	0.09
French toilet	92.9	7.0	0.1	0.01	0.07

Source: Industry Institute, Technical Division, Beirut, 1961.

The head of the technical division of the Industry Institute, Mr. Adnan Al-Sheik, said that there has not been any noticeable change or difference in the contents of the soaps analysed between the summer of 1961 and now (April, 1965).

The standard suggested by the Lebanese standards Institution and the analysis done by the Industry Institute given above show wide variation between what is suggested as a standard for soap and what it actually was and is. Consider the third type of soap whose analysis is given above in table No. 24. Dry soap forms only 40.2 per cent, alcohol insolubles 52.7 per cent, water insolubles 25.8 per cent. It is surprising to know that 52.7 per cent of the soap that the consumer buys is water insolubles. Only 40.2 per cent of it is soap. Generally speaking, water insolubles and alcohol insolubles are far above what the standard sets. The difference between a local toilet soap and a foreign toilet soap is in the free acidity or alkalinity as the above analysis shows. For example, the sixth local toilet soap has a free acidity or alkalinity of 20 per cent. The English toilet soap has a free acidity or alkalinity of less than the local toilet soap, namely, .07 per cent. The suggested standard sets a maximum of 0.10 per cent free acidity or alkalinity for toilet soap. It can be seen that the local soap has a free acidity or alkalinity much above the suggested

standard, while the English soap has a free acidity or alkalinity of less than the suggested standard. The reader may consider the suggested standard and the analysis and look for the differences himself. He will find out that there is no homogeneity or standardized production.

Standardization is an important part in the marketing process. The determination of the form and the contents of the product are most vital to marketing. Establishing and maintaining standards and providing conformity to them is very important. The following reasons are cited to show how standardization facilitates marketing of the product:

1. Standardization assures the consumer that the product he buys is the same one each time. A soap containing 70 per cent of dry soap at one time and only 60 per cent at another time does not give the consumer the confidence in the brand which behaves in this manner. There is nothing that assures the customer that the product he buys is homogeneous unless there is a standard.
2. Standardization creates goodwill for the product and helps the customer patronize it. When the consumer knows that he buys a product with certain specifications all the time, he does not make much inquiry about that product. He has tried it and he wants to continue using it.

3. Standardization of soap in particular enhances sales in general. The "all purpose" soap being sold for toilet, household, and washing would probably sell more, if it were classified and standardized. A certain segment of the population who are not sure of the standards applied would not use the "all purpose" soap for toilet. They would do on the other hand if they are assured of the contents of the soap which is made up of chemicals whose improper mixing would create harm to the user's skin.
4. Standardization permits mixed or pooled shipments of graded commodities, thus the higher price of standardized products lowers percentage cost. It also permits mixed or pooled storage of graded products and again the higher quality of standardized products lowers percentage cost.

Standardization in the soap industry is technical. Technical or chemical standards are among the most useful and accurate types. Chemical analysis can be employed to test the conformity of the products to the set standards. Those standards suggested by the Lebanese standards Institution would greatly aid in raising the status of the soap industry if they become mandatory.

d. Grading

"Grading is a process which tests the conformity of commodities to standards that have been previously set up." 61

As there are no applied standards in the production of soap in Lebanon, one should not expect to find grading done according to an established standard. Grading soap among soap producers in Lebanon is done according to size, color, and shape and sometimes according to smell. A soap is good or poor, of this grade or that simply depends upon the value judgment of the one undertaking the task of grading. Very often grading is done according to the raw materials used in manufacturing soap. If the raw materials (fatty acid oils) are of good quality, then the product is graded and priced accordingly without reference to how the raw materials reacted and whether the product conforms to a standard or not. Therefore, one would find two pieces of soap from the same bulk of production widely different from each other in form, size, color, and even in contents. Different in form because soap is moulded and cut by the knife. In size because when cut one happens to be by chance small and the other large. In color because water in the soap takes time to evaporate, and as drying every piece of soap is not identical with the other,

61. Theodor N. Beckman and William R. Davidson, op. cit., p. 510.

one exhibits a slight difference in color from the other. In contents - this mainly has to do with the percentage of water, water insolubles, etc. in the soap. If one soap is allowed more time to dry then its water content becomes lower. Thus it can be said that grading is inadequate and inaccurate.

6. Production Planning and Control

In any factory there has to be a lot of planning or forethought to the execution of each order. There has to be someone who thinks of the what, where, how, and when of each particular job. When the thinking is completed, another one has to arrange that the plans and decisions are put into effect. Generally speaking, this involves a system of shop orders and clerical routines to set plans in motion and watch the progress of events and see that they work out right. All of this is production planning and control; and in its fundamental principles it is indispensable in any producing unit.⁶²

Production planning even in the most advanced soap factories in Lebanon does not cover more than a short thought of the materials to be used in production. How much of each material is to be used is left to external forces. The reaction

62. A.W. Willsmore, Modern Production Control
(Sir Isaac Pitman and Sons, Ltd., London, 1955),
p. 2.

itself decides whether more alkali or salt is to be used. As a result of this one should not expect to have written plans or orders to be executed - for things are planned beforehand. In other words, there are no standards of production to form **guideposts** for production planning.

Control aims at preventing difficulties before they occur. It tries to eliminate those products that do not conform to the established standard. Laboratory analysis of soap products is necessary to determine their compliance with the standard. Unfortunately, not a single soap factory in Lebanon has a laboratory or checks products systematically. This lack of control on products leaving the factory does not create goodwill for the business and does not give confidence to the consumer in those products.

7. Selling by piece

Foreign soaps are ordinarily sold by piece unlike local soaps which are sold by weight. It appears to the writer that selling by piece is a strategic technique of marketing. Certain foreign soaps in the local market are being sold at P.L. 50, 40, 35. The piece which sells at P.L. 50 weighs 100 gms. Therefore, 1000 gms. sell at P.L. 500, or a kilogram sells at L.L. 5. The consumer in most cases is unaware of this fact. He does not know that he buys one kilogram of soap at L.L. 5. He knows that he buys a piece of soap for P.L. 50. Local soap

made from olive oil sells at a maximum of L.L. 2. Ask any expert on soap and he would tell you that olive oil soap cannot be excelled and there is nothing like it. Why is it then that the consumer prefers foreign soaps? The answer is simple. The consumer - as has already been pointed out earlier - wants a soap which lathers quickly, has a nice smell and shape and produces good cleansing results.

Local soaps from olive oil do not possess all these properties. To obtain such characteristics in locally produced soaps all that is needed is the aid of technology and science. To introduce modern equipment and machinery, technology and science into a factory is not without cost. Cost analysis of modernization will be given in Chapter V.

It will be a valuable marketing strategy to change to selling by piece after having accomplished the requirements for such a strategy. This means that selling by piece becomes advisable and possible only when standards for size, weight, form, color and contents are set and controlled. In other words when homogeneity in products is existent.

8. Trained Salesmen

The ultimate aim of production is selling. The task of a trained salesman is to inform the consumer of the product, its qualities, its advantage and how it can be used. In the case of soap, trained salesmen can sell more by advising their customers to use a certain brand and convince them to use it.

Chapter V

Feasibility of Modernization

Modernization of the whole soap industry must be considered in view of demand for soap. Most of the soap produced locally is used as laundry soap. It has been pointed out earlier that detergents are becoming more popular as cleansing agents for clothes and dishes. This means that the market for laundry soaps is getting narrower. Some local business-men have felt this change in demand and so they had established detergent plants to meet this change. Therefore with this fact in mind it is not wise to invest for the purpose of modernizing laundry soaps production. We have, on the other hand, found out that there is a growing market for toilet soaps.

In this chapter the writer will discuss the possibility of establishing a modern soap factory for the production of toilet soap. He will consider the economic and cost factors involved in the establishment of such a factory.

A. Size of plant

Our analysis in chapter III boiled down to the conclusion that the Lebanese annual imports of soap amount to about 1000 tons. It has been also concluded that about 90 per cent

of total imports of soap are toilet perfumed soap coming mainly from the United States of America and England.

It has been also found that the Lebanese consumption of locally produced soap reaches an annual figure of about 8000 tons. Out of this figure of "all purpose" soap around 50 per cent (4000 tons) is consumed as toilet soap. With this information one can formulate an opinion on the size of the plant proposed for manufacturing toilet soap.

When proper manufacturing methods are followed and the factory is capable of producing a soap produce competitive with the imported one it is estimated that a wholesale price of P.L. 20 per piece of 100 grams can, most probably gain a big share of market. It is estimated that imports will drop by 30 per cent if this price can be maintained. With such a price there seems to be no strong competition from foreign soap. Reliable sources indicate that with the present custom duties on toilet soap (35%) foreign producers can hardly compete with locally produced soap on price basis (P.L. 20 per piece of 100 grams). They will not be able to compete on non-price basis because complete consideration for modern and up-to-date marketing methods has been provided for.

The production of good quality toilet soap will also compete with the "all purpose" soap being used for toilet

purposes. It is estimated that out of 4000 tons of "all purpose" soap being used as toilet soap about 15 per cent will be gained by the new project. Therefore, the market demand for this type of soap is estimated as follows:

30% of imports (1000 tons)	=	300
15% of "all purpose" soap (4000 tons)	=	<u>600</u>
Total toilet soap demanded	=	900 tons -----

The question now arises as to the most economical scale for the plant. This question can be answered in the light of demand which has been already ascertained and the type of equipment and machinery to be installed for manufacturing soap. Contacts with large companies producing soap equipments and installations revealed that the minimum capacity of a toilet soap manufacturing machine is 250 kilograms per hour. A second type installation produces at a capacity of 500 kilograms per hour. The second type installation working at full capacity for 340 days per year at 8 hours a day turns out a total production of 1360 tons. Allowing for a small percentage of inefficiency and for rejected products a total annual production of about 1200 tons is expected when installing this machine.

The alternative is, however, to use the 250 kilograms per hour type installation instead of the 500 kilograms, per hour type and work two shifts a day. Consideration of this

alternative revealed that there are no significant economic savings as a result of using the 250 kilograms/hour installation type. There will be no considerable savings in cost as the major proportion of cost is that of raw materials. Also, the cost of the 500 kilograms/hour installation type is not twice that of the 250 kilograms/hour installation type. There is only about 20 per cent difference. Moreover, if demand increases in the future then 500 kilograms/hour installation will be capable of working two shifts, while the 250 kilograms/hour installation can satisfy the present demand at two shifts a day.

The above consideration confirms that the plant size taking demand, machine capacity and cost into consideration should not exceed a total annual production of nearly 1200 tons. This figure seems to meet all the economic requirements of the project. Therefore cost analysis will be carried on the basis of 1200 tons of soap annually. Cost figures which will appear hereafter are estimates of different engineers, eminent business-men, and offers made by large foreign companies.

B. Capital Expenditures

Capital expenditure will include the cost of land, buildings, equipment and machinery. It is estimated that for building a factory whose annual production amounts to 1200

1200 tons of soap per year require the following expenditures:

<u>Item</u>	<u>L.L.</u>
Land	350,000
Buildings	450,000
Equipment and machinery	400,000
Cars	30,000
Fixture and furniture	20,000
Laboratory equipment	<u>75,000</u>
Total capital expenditure	<u>1,325,000</u> *****

The construction of the factory requires an area of 5,000 sq. meters of land. The area will furnish the factory with the production area, space for equipment and machinery, a store-room for finished products, a store-room for raw materials, a laboratory and four or five offices for the administration. It is estimated that all of these requirements will not take more than 3500.00 square meters of the land. The rest remains for future expansion or so.

Buildings are of the industrial type with proper foundation and layout to facilitate the use of equipment and machinery and enhance efficient production.

Equipment and machinery are of the modern type. One complete installation is to be used with a capacity of 500.00 kilograms per hour.

Fixtures and furnitures will include office equipment and other tools needed in the factory.

Laboratory equipment includes all necessary tools and parts for proper and efficient analysis needed by soap manufacturing.

C. Current Expenditures

Current expenditures are formed from all expenses incurred during one year such as raw materials, spare parts, water, electricity, fuels, direct and indirect labor, administration, selling, depreciation and other expenses of a current nature.

1. Raw materials

The production of 1200 tons of toilet soap will need about 930 tons of fatty acid oils, 190 tons of caustic soda, 2.50 tons of salt, and different amounts of perfumes and color materials.

During a period of normal prices the cost of raw materials for the production of 1200 tons of toilet soap will be as they are given in table No. 25.

Table No. 25

Cost of raw materials

(Wt. in tons, value in L.L.)

Raw materials	Percentage	Weight in tons	Cost/ton L.L.	Total cost L.L.
Fatty acid oil A	70	651	900	585,900
Fatty acid oil B	20	186	1000	186,000
Other oil C	10	93	750	69,750
Total	100	930	-	841,650
Caustic soda	-	190	250	47,500
Perfumes and colors	-	-	-	90,000
Salt	-	1.90	-	475
Total cost of raw materials	-	1121.90	-	979,625

Total cost of raw materials needed for the production of 1200 tons of soap is approximately 979,625 Lebanese Pounds.

2. Other expenses

The following estimates are made for other current expenses:

<u>Item</u>	<u>L.L.</u>
Spare parts	35,000
Water, electricity and fuels	40,000
Direct labor	35,000
Indirect labor and administration	85,000
Bad debts	25,000
Interest	50,000
Other expenses	<u>50,000</u>
Total current expenses	<u>320,000</u> =====

3. Depreciation

Buildings are usually considered to have a life-time of 15 years. Machinery a life-time of 8 years. Furniture and laboratory equipment a life-time of 5 years. Therefore depreciation cost will be as follows:

<u>Item</u>	<u>Depreciation/year (L.L.)</u>
Buildings	30,000
Equipment and machinery	50,000
Furniture	4,000
Laboratory equipment	<u>15,000</u>
Total depreciation	<u>99,000</u> =====

4. Marketing costs

Marketing costs will include cost of advertising, transportation, packaging, etc. It is estimated that marketing costs will be as follows:

<u>Item</u>	<u>L.L.</u>
Advertising	250,000
Transportation	25,000
Packaging	75,000
Other costs	<u>25,000</u>
Total marketing costs	<u>375,000</u> *****

5. Total annual costs

A summary of total costs is given below:

<u>Item</u>	<u>L.L.</u>
Raw materials	979,625
Other current expenditures	320,000
Depreciation	99,000
Marketing	<u>375,000</u>
Total annual costs	<u>1,773,625</u> *****

The above list gives the total annual costs expected for the production of 1200 tons of soap. A total of L.L. 1,773,625.

Working capital must be also provided. It is estimated that about L.L. 400,000 of working capital is needed.

D. Revenues

With the present price situation and competition in the market, it is estimated that a wholesale price of L.P. 20 per piece of 100 grams, as has been already pointed out, will decrease competition and encourage a good number of the "all purpose" soap users to shift to using the new toilet soap product.

It is estimated that during the first years of its operation the factory's total production of 1200 tons will be distributed as follows:

<u>Distribution</u>	<u>Tons</u>
Local market	900
Export market	200
Inventory	<u>100</u>
Total	<u>1200</u> *****

At the said price of P.L. 20 per piece of 100 grams (L.L. 2000 per ton) revenues generated from sales in the local and export markets will be:

900 tons C	L.L. 2000	=	1,800,000
200 tons C	L.L. 2000	=	<u>400,000</u>
			<u>2,200,000 L.L.</u> *****

E. Annual Profit or Loss

When total annual expenses are deducted from total revenues, the annual profit or loss can be obtained, thus :

Total revenues	L.L. 2,200,000
Less: total cost of sales	L.L. 1,623,985
(1,773,625 x $\frac{1100}{1200}$)	
Net profit or loss	L.L. 576,015
Tax	<u>L.L. 213,125</u>
Net profit after tax	<u>L.L. 362,890</u> =====

F. Rate of return

Rate of return on invested capital and total capital is calculated, thus:

$$\frac{362,890}{1,325,000} = 27\% \text{ approx. on invested capital}$$

$$\frac{362,890}{1,325,000 + 400,000} = 11\% \text{ approx. on total capital.}$$

G. Conclusion

Cost analysis for feasibility of modernization clearly indicates that modernization is feasible. From an economic point of view the establishment of a modern soap factory will decrease the demand for foreign exchange and promote the general level of technical know-how of those employed in the business. The savings in foreign exchange realized as a result of this project can be channelled for more important developmental projects needed for the country.

Chapter VI

Problems of Modernization

A. Financial Problems

It has already been noted earlier that the soap industry in Lebanon is composed of a number of small establishments which are either owned by individuals or by families. One factory was recently organized as a company, but is still owned mostly by family members. Under individual and family ownership structure the soap industry could not be modernized because modernization meant huge sums of money to be invested in modern machinery, modern buildings, and modern manpower.

The individual in the midst of so many technological and industrial movements stood still because he alone was unable to meet the financial requirements which meant the investment of large sums of money in his business to keep up with the pace. He alone could not secure all the capital needed to be invested in his business for the purpose of improving it. The West have found a solution to this problem. With the coming up of financial problems they began to tackle them by introducing or changing their businesses into the company type under

which money resources became available from more than an individual or a family. They saw in this form of business (The Company) an answer to their problem. Instead of one or two persons with limited resources undertaking a business that needed more effort and more money, they found in the sharing principle a key to surmounting financial obstacles. Because of the lack of financial means and other reasons already discussed before, the Lebanese soapmaker today is rather aware of the situation which he is in, but is unable to do much about it. Today he lives the embarrassing situation of foreign competition, and his whole existence is seriously threatened by it. Therefore, if modernization of the soap industry is to take place its financial requirements cannot be met by the present typical Lebanese soapmaker. The soap maker found in this situation is called to give up his individualistic character and invite either his friends in the industry or other investors to share with him the solution of his financial problems. Without such collaboration it seems hard for the present soapmaker to prosper, progress and exist.

B. Small-scale Production

Another very important problem which faces the modernization of the soap industry is small-scale production. It has already been noted earlier that most of the soap

factories in Lebanon are small. The typical manufacturer does not produce more than 400 tons of soap annually. If this manufacturer is to modernize, 400 tons of production is too costly for the smallest type of machinery used in soap production. Contacts with soap equipment producers revealed that the smallest type of machinery is one which produces 250 kilograms per hour, or an annual production of about 600 tons.⁶³ This means that even the smallest machine will be used under capacity other things being equal.

It has also been found that a machine which produces twice another one does not cost twice as much as the other. Therefore, small-scale production seems to be an obstacle in the face of modernizers.

From the point of cost of production small-scale production is also a handicap. Average cost of production decreases as the quantity of production increases. Thus cost of production is not directly proportional to quantity produced, but rather decreases as quantity increases.

Cost analysis is wide and varied and will not be considered from all angles. It is satisfactory here to mention the general philosophy underlying variation in cost. Perhaps the most frequently used classification of costs is fixed and variable. Fixed and variable costs are defined as follows:

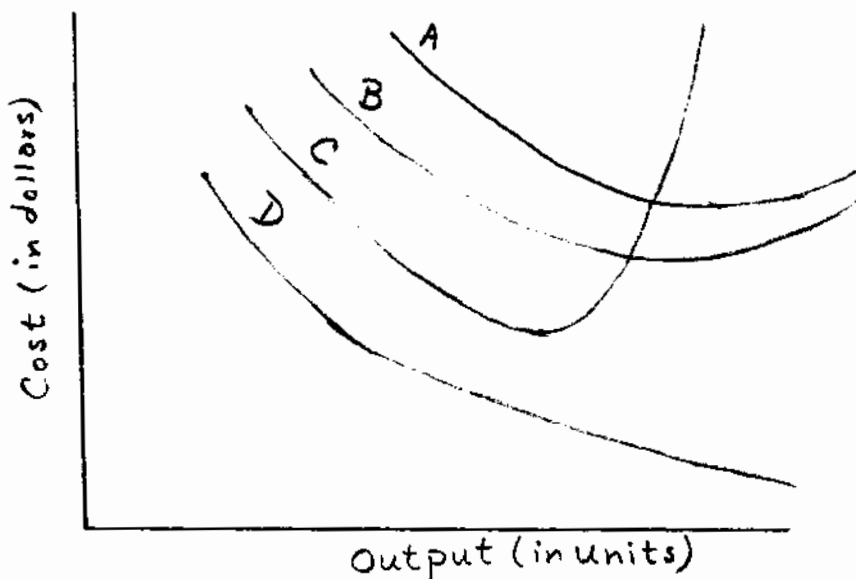
63. Calculated on the basis of 8 hours of work per day only.

"In economic theory, a fixed cost is one that does not vary with output (in the short run), while a variable cost is one that does. In turn, the short run is defined as the period in which some costs are fixed (do not change) and the long run as the period in which all costs can be varied." 64

Variation in short run costs can be well understood from the following graphical representation in Fig. II. 65

Fig. II

Cost variation



64. Erwin Esser Nemmers, Managerial Economics (John Wiley and Sons, Inc., New York, 1962), p. 200.

65. Ibid., p. 201.

The curves A, B, C and D represent the average total unit cost, the average unit variable cost, the marginal unit cost and the average fixed unit cost. Curve A, for example, shows that the average total unit cost decreases up to a certain point after which it starts rising. The curve therefore, suggests an optimum level of production with the least cost. The rest of the curves are left for the reader to explain.

The previous discussions lead us to believe that there are economies of scale - a scale at which the average total cost is minimum. For further discussion on long-run costs see (Erwin Esser Nemmers, Managerial Economics, John Wiley & Sons, Inc., New York, 1962, p. 205)

C. Market Problems

The Lebanese Internal market is small. Its people do not exceed 1,500,000. The narrowness of the internal market imposes limits upon which to formulate plans for modernization of the soap industry. It has been mentioned previously that modernization requires modern equipment and machinery and so many other facets of modern industries. All of these requirements presuppose the investment of large sums of capital, which require an optimum output for profitable operations. Due to the smallness of the market optimum production seems to be greatly influenced by the size of the market.

D. Technical Problems

Production and other technical problems of management, administration, and control can be easily solved by training capable staff to do the various activities required by the industry. If local staff is not available to solve technical problems of the industry it is advisable that foreign know-how and technical assistance be imported. The local assistants or trainees are recommended to learn and benefit from the foreign experts. If necessary they should be given additional training outside until they gain all required foreign experience demanded by the industry. Since technology and know-how are continuous dynamic phases of today's industries it is, therefore, a must that the technical personnel already trained and experienced be always up-to-date on changes that the industry undergoes. This follow up is essential and necessary for the continuous existence of modern industries.

E. Problems of Competition

Competition from foreign soaps is keen. It has already been found out that toilet soaps form the major part of total imports of soap into Lebanon. They form about 85-90 per cent of total imports of soap. We cannot say that foreign soaps compete on price basis with locally produced soap as the former is being sold at a much higher rate. One kilogram of foreign

toilet soap is normally sold at L.L. 4.00, while locally produced toilet soap is normally sold at L.L. 2.00 per kilogram.

The main reason for foreign competition is quality. Foreign soaps are considered to be better soaps than the local ones. The quick lathering, the perfumes they contain and their packages make them more attractive to the user. We should not, however, forget that advertising, sales promotion and other marketing principles employed in pushing sales are also important factors in the said competition.

Therefore, to reduce competition problems, attention must be given in order that soap products are at least of the same quality like foreign soaps or even better. This can be realized if proper attention is made to production methods and to chemical analysis.

Finally, we should apply other instruments of competition such as selling at a lower price, if possible, soap of the same quality, like foreign soaps. This is assumed to increase sales and cut down competition.

When quality of soap has reached the foreign level or so, the Government may for the sake of protecting the industry use its influence to reduce foreign competition. It can, for example, raise the import duties to a level which will mean the reduction of imports of soap and, therefore, a decrease in competition.

Chapter VII

Conclusion and Recommendations

A. Conclusion

When all requirements for modernization of the soap industry are realized, i.e. when production and marketing methods, techniques, equipment and machinery are changed to introduce a soap product competitive with foreign soap products or excelling them, it can be said that the industry reached a modern level. Besides change in production methods, techniques, equipment and machinery a basic change is required in business attitudes, in the look out at technological advancements, and in the general administration and execution of business. With the above changes and the implementation of new modern approaches and practices, what has remained of the industry might be retained and improved. Modernization is feasible and realizable if and only if careful attention is given to see that the products are of the same or higher quality standard than foreign soaps. The cost estimates given in Chapter VI showed that from an economic point of view modernization is attainable.

The establishment of a soap industry of the standard required will save lots of foreign monies that outflow from

the country each year for imported soaps. Foreign exchange in the value of about L.L. 1,500,000 is being used each year for provision of soap imports. A great part of it can be saved and channelled for investment in capital goods needed in developmental projects.

The modernization scheme of the industry will help in the development of technical know-how of so many people connected with the industry. It will help the technical staff gain more competence and ability by being exposed to problems of modern industries.

Keeping the industry competitive, so to speak, with foreign ones require prompt and dynamic thinking for the solution of every day problems of the industry. The industrialists will learn that their continuous existence assumes activity, readiness, and alertness in the business environment. This atmosphere of the modern industry will change radically the passive attitude of the industrialist into a more active and adaptive one.

In general, soapmakers are generating a profit, a precarious profit threatened by the fact that the "all purpose" soap they produce at present will not be demanded in the future. Advertising and sales promotion will increase the popularity of detergents as cleansing agents, thus cutting down more and more the use of laundry soap. Concentration on toilet soap

production, therefore, is the hope of the soapmaker. He has to adapt himself to customers' requirements. It is expected that with future rise in national income and per capita income of the population the consumer using the "all purpose" soap for toilet purposes will not do that any more. He is expected to look for a toilet perfumed soap. The soapmaker, therefore, still has ample chance to adjust and modify his traditional soap business to meet consumers tastes and demand. Nevertheless there is the possibility of even starting a new modern soap factory which is believed to turn out products compatible with foreign ones.

B. Recommendations

The writer will give in the following sections certain recommendations which when properly implemented their benefits will be for the general welfare of the country and its citizens.

1. Duty of soapmakers

a. Soapmakers are urged to give up their individualistic business feelings and cooperate either with friends in the industry or with other businessmen for the sake of solving their financial problems.

b. Soapmakers are recommended to look and plan for future time. They should not be satisfied with immediate and short-run profits.

c. Soapmakers are advised to conduct business under the company form rather than continue the traditional family form of doing business.

d. The aid of sciences and technology is of paramount importance to the industry. Therefore, soapmakers are recommended strongly to make every effort to include in their portals the necessary technical staff. Such a staff will keep pace with everyday changes in the business.

e. Soapmakers are recommended to form an association which will look into their interests with the Government, foreign bureaus, and in both the local and the export markets. The association can help soap producers by recommending to them the best possible ways and means for producing and marketing soap. The association will represent soapmakers in all their dealings and disputes with the Government by conferring with those concerned their opinions and defending them. The association will keep up with changes and innovations that occur to the industry.

f. Soapmakers and other businessmen are urged to carefully consider the findings of the writer concerning the establishment of a modern soap factory. If local businessmen do not respond positively to these findings, it will be too late to do anything after foreign investors have exploited this opportunity.

2. Duty of consumers

Consumers can help a lot by passing on their likes and dislikes about local soaps to soapmakers. They can do this most efficiently through consumers' cooperatives. The latter, seeking the interests of both consumers and producers can provide soapmakers with fruitful criticism which is assumed to encourage soapmakers to act in its light. When consumers are consulted on soap they can help soapmakers by being objective in passing information.

3. Duty of the Government

The Government responsibility in the promotion of any industry is beyond estimation. The Government can use its power and authority, information and knowledge to tailor a certain situation to the interest of the nation and its citizens.

With regard to the soap industry the Government after seeing that soap products have reached a level competitive with foreign soap can do the following:

a. Adapt the philosophy of protecting infant industries. The Government can, say, raise customs duties on imported soaps up to a certain level which will ensure progress for the local industry. This, however, is to be done with care in order not to impair products quality.

b. The Government can help in the advancement of the industry by concluding trade agreements with other countries to encourage exportation of soap.

c. The Government can also help by including soap products in its trade fairs locally and abroad.

d. Finally, the Government can extend subsidies and financial help to business men undertaking a project which promises the achievement of soap products competitive with foreign high quality soaps.

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