WP1: Preparation-D.1-2: National Report/Jordan

WP1.2

JUST

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Revision History

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(*) Action: C = Creation, I = Insert, U = Update, R = Replace, D = Delete

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I. Introduction

Jordan is located in Southwest Asia between Lat. 29° 30' and 32° 31', south of Syria, west of Iraq, northwest of Saudi Arabia, and east of Palestine. The total land area of Jordan is approximately 89,000 km^2.

The government of Jordan has just finished a national census, which indicated a steep increase in the total human population in Jordan. The estimate of total population was about 9.5 million of which, 80% lives in urban areas and 20 % in rural areas (Figure 1).

The annual human population growth in Jordan was closed to 3%.

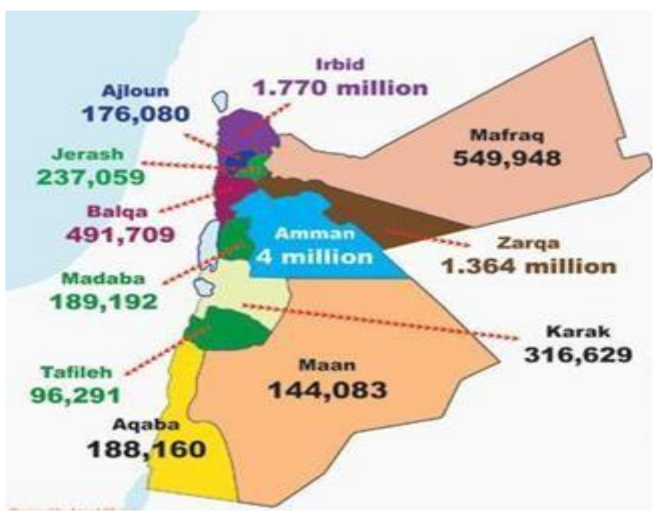

Figure 1: Jordan population 2016 census.

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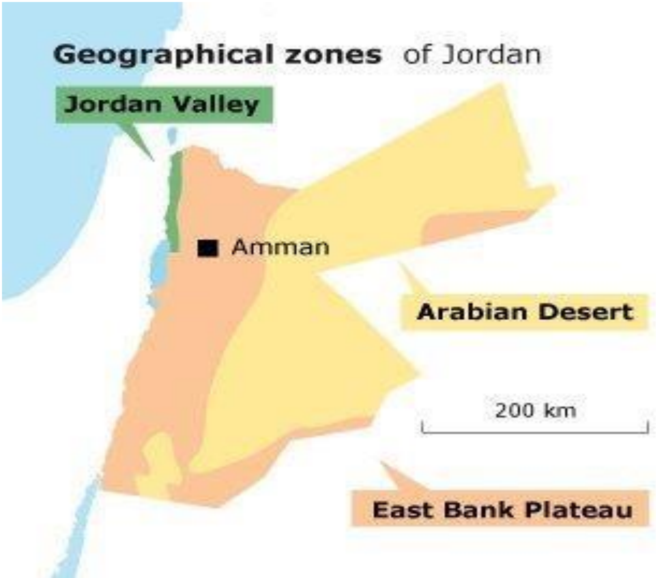

Figure 2: Geographical zones of Jordan (Source: Frank Chronicle of the Middle East, 2016)

Jordan has a long, hot, dry summer, usually extending from May to October, and a cold winter, usually from December to February. Rain falls only during the winter months and is barely adequate for the country's needs. The climate is generally a Mediterranean type, but that applies mainly to the higher lands. Further, east towards the desert, it is hotter during the day and cooler at night. It is also very hot in the Jordan Valley and on the Gulf of Aqaba during the summer months and pleasantly warm there in winter.

During the last few years, Jordan's economic growth has slowed down due to the conflicts in Middle East. The major constraints to Jordan economic are complete dependence on imported oil for energy, water scarcity supplies, and regional instability and conflicts. These factors, in addition to many others, have led to a reduction in tourists' activities to the region and Jordan, the influx of Syrian and Iraqi refugees to Jordan, and more military expenditure to protect Jordan borders with conflicting countries. Jordan economic has suffered from more expenditure to deal with the 1.5 million Syrian refugees in Jordan. The total Jordan's public debt has reached a record number, representing 95% of its GDP in 2016. Jordan's economy continues to suffer from the collapse of trade with Iraq and Syria, which closes the doors for the export of Jordanian products to neighbouring countries.

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As part of Jordan's economy, the Jordanian leather industry has also declined and needs innovative approaches to improve it. The leather tanning process was leading during the 80s and 90s of the last century, ranking in the top among neighboring Arab countries. After the free-trade agreements with the Turky, China and European countries, and due to the political situation of the neighboring markets, the Jordanian leather industry has very limited exports of tanned leather to other countries. The industry are currently using finished imported leathers to make shoes, bags and belts and to design final products. The leather industry is currently facing many challenges including limited exporting markets, high production and processing cost, low quality of raw materials of leathers produced in Jordan, difficulty to compete with the products of leather from China. The leather sector should maintain the educational and the industrial activities to improve leather processing and product quality. This report contains the description of current situation of leather industry in Jordan, the actions to improve it and the needs for promoting and helping of this sector.

II. Executive Summary

The leather sector in Jordan has declined recently, but has a potential for reform and improvement. The leather sector contributes to 35% of the national market needs. Many challenges facing this sector includes the high cost of tanning process for the national raw materials and the manufactured imported leather which used for cutting and shaping for the final design.

Jordan has many raw materials and used to export up to 6 million JOD raw materials as wet blue leathers 15 years ago. Moreover, the supply of the raw materials of leather is increasing in Jordan due to the increase in human population and the increase in the demand for meat from slaughtered animals of sheep and cows. There is also a continue use of leather products such as shoes, belts, bags, etc. for the Jordanian market, and international markets specially which are interested in natural leather products.

This desk review gives an overview of this crucial sector in reference to leather wide consuming market and its contribution to the national industry effect. In addition, a brief assessment of the different components of this sector is discussed with special emphasis on tanned leather and process, the manufactured leather that is ready for finishing and designing.

Among the main challenge identified are improving the tanning process techniques, reducing cost, reforming the policies and regulations related to this sector and opening new markets. This review shows the gap in regulations and policies, which needs to be reform to ensure better, and benefits to the leather sector.

III. Characterization of the Jordanian leather sector.

The leather products in Jordan contributes around 35% of the national leather market. The total investments in leather sector are 40 million JD including tannery and shoes/belts leather manufacturing. Around 5-8 workers per small company job opportunities are filled by Jordanians and non-Jordanian workers in the leather industry.

According to 2016 animal census, there are approximately 82600 heads of cows in Jordan (Table1).

Table 1 Total number of cow, Sheep and Goat heads in thousands in Jordan. (Ministry of Agriculture)

Year	Goat			Sheep	Caws		
	Goat total	Jordanian	Arabian		total	Jordanian	Holland
2007	569.38	560.08	9.30	2251.45	80.95	4.50	76.45
2008	1100	1048.39	51.61	2252.00	79.43	3.00	76.43
2009	1145	1145		2726.15	68.78	5.44	63.35
2010	849	847		2316.31	69.79	5.99	63.58
2011	889	889		2391.29	65.81	6.01	59.79
2012	885	885		2389.60	70.34	6.64	63.70
2013	836	836		2311.10	75.60	6.60	69.00
2014	857	857		2680.30	78.30	9.30	69.00
2015	1007	1007		3170.0	81.6	9.36	72.317
2016	1100	1100		3280.0	82.6	9.304	73.285

Numbers and distribution of sheep and goats in Jordan are presented in Figure 3. Sheep and goats are considered the main source of raw leather in Jordan.

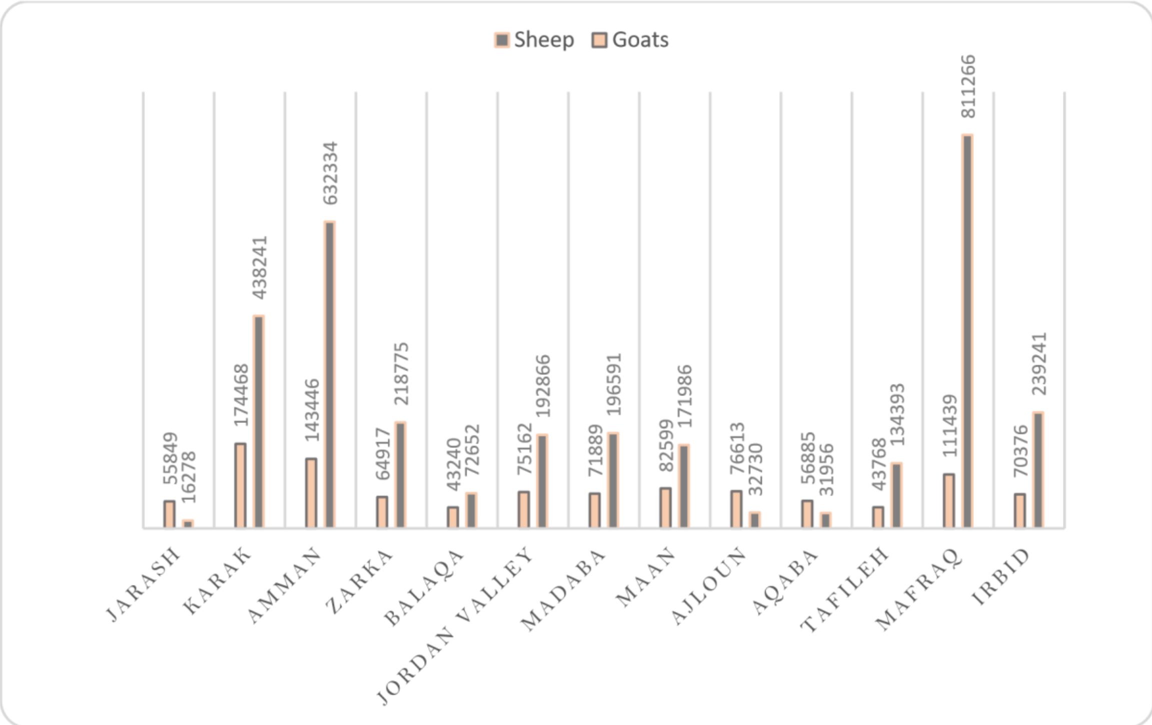

Figure 3: Number of sheep and goats heads per governorate (2016 Ministry of Agriculture)

Since 1955, there were registered companies in Jordan for leather industries as tanning and final products mainly the shoes. At 1993 there was new motion toward the new national health shoes industry. Moderate cost and market sales were noticed for these products compare to the good\ bad qualities products, which were imported from other countries. Some of the national products were CE marking and ISO certified.

Nowadays, leather industry in Jordan has a limited production, profit and development due to the high market-competition, the lack of experts with scientific background in processing, designing, and manufacturing final products of leather. The medium enterprises and small technical supports for this sector had a limited financial and innovative support. There is also an increase in the cost of tanning process.

The traded-in leather products from Europe, Canada and China strongly compete the national Jordanian leather products; due to their smart manufacturing by the price-based markets, low cost productions and the economy scale. Many of these products have high quality but the main reason to highly competitive in the Jordanian market is the low price compared with Jordanian products, particularly the leather products from China.

Many leather manufacturing factories and companies have closed down its businesses due to the free trade agreements between Jordan and Europe, Canada, and Turkey since 2002, 2009 and 2009, respectively.

These agreements strongly and quickly affected the old and modern leather industries, specially the shoes industries. Nowadays, there are 46 leather importing companies registered in Jordan compared with 76 producing companies. There is a strong trend in the Jordanian market for importing leather products sue to its low price, fashion, and higher quality. Figure 4 shows the number of the Jordanian leather factories for last 10 years.

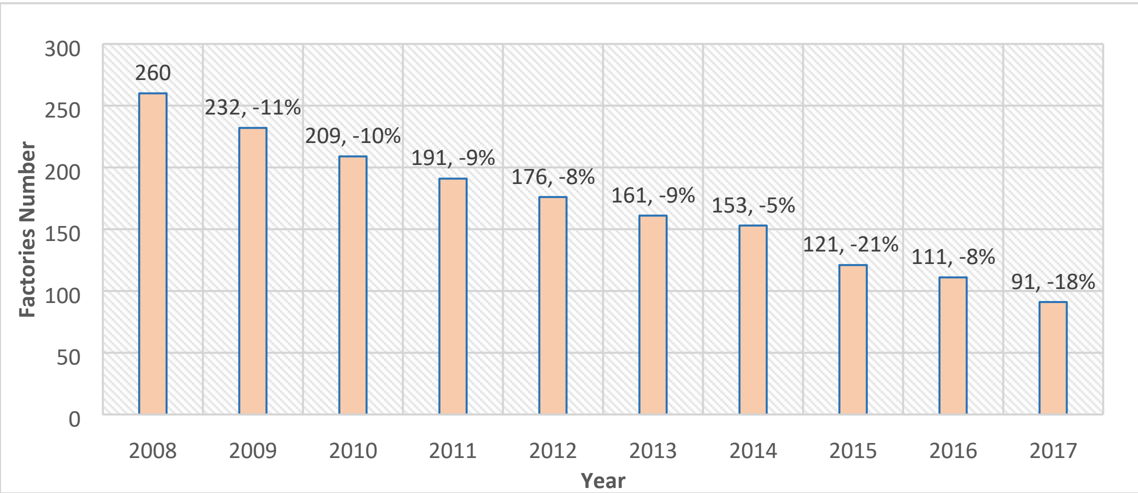

Figure4: The total numbers of leather factories from 2008 to 2017 (Amman Chamber for Industry).

It's clear that there is a sharp decrease in number of leather factories from 216 factories in 2008 to 91 factories in 2017, representing a yearly declining rate of 8-21 %. The rate of decline for the last 19 years represents a 65%. By looking at the imported leather products by Jordan for the last 10 years (Fig. 5), it shows that Jordan has a huge amount of trade-in and imported leather products. Investing in production and processing the leather products in Jordan can refresh the national market.

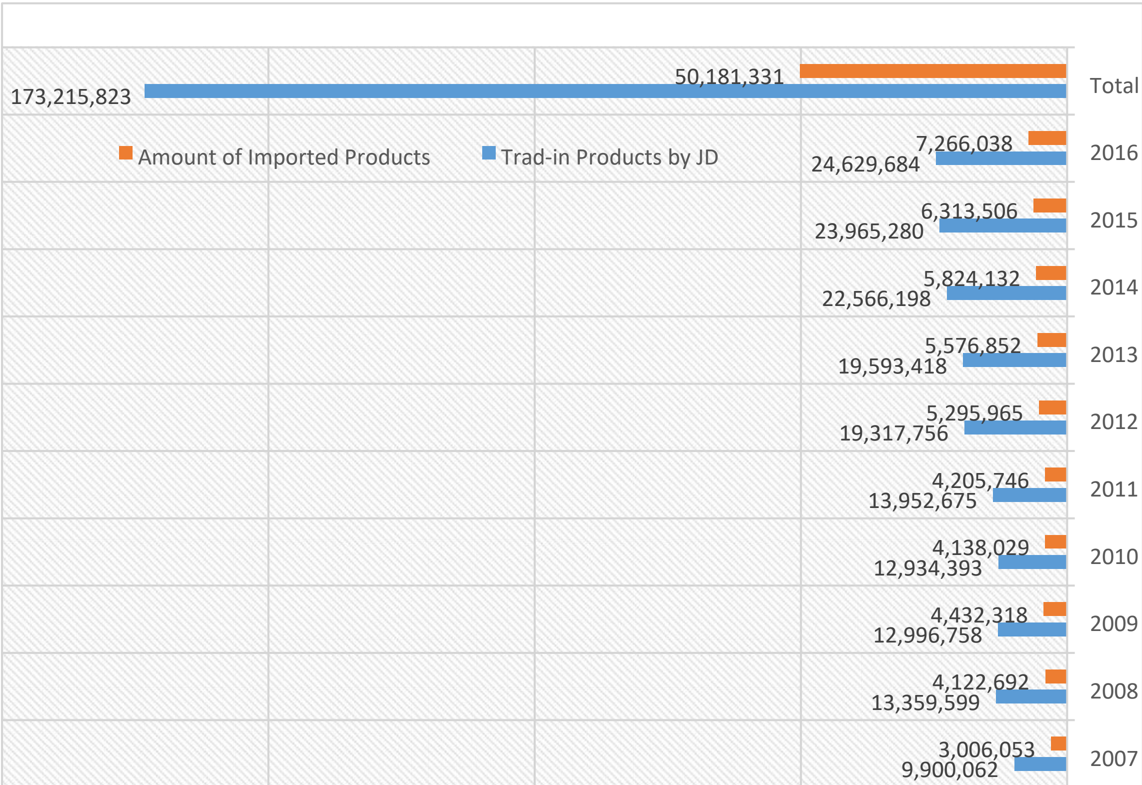

Figure5: Amount of Trade-in Leather and Values in JD. (Amman Chamber for Trade)

III.I. Production systems in Jordan.

The leather production systems in Jordan are divided into leather tanning and leather- manufacturing processes. The main product of tanning is the wet-blue leather, and the manufacturing products are the shoes (men and women footwear), bags, belts, etc. using the finished imported leather from China, Turkey, and European countries.

The number of tannery factories in Jordan is 4, representing a very low ratio to total number of leather-importing companies (76 companies). With the presence of highly supplies of leather raw materials from slaughtered animals (mainly goats, sheep, and cows), the leather sector in Jordan has a great potential for improvement and reform. The leather sector in Jordan should replace the old leather processing and tannery techniques with the new, modern techniques, which can reduce the production cost. The leather sector should also push to improve regulations and polices related to this sector and to invest in recycling the water from the tannery process, and get proper training in processing, designing, and finishing the leather products. The sector should also work on improving the quality of the leather raw materials from the slaughtered animals by reducing the use of knives during the flaying process

Tanned Leather:

The leather industry in Jordan uses old techniques to produce the wet blue leather, which is exported to the international natural-leather market. This industry uses a lot of water for the beamhouse operation (including soaking, liming, unhairing, deliming, and pickling). The leather production can be categorized into three stages using cow, sheep and goat leathers to manufacture shoes, clothing, bags, and belts. The annually consumption of leather is up to 50 Million foot^2 of cow's leather 12 Million foot^2 of goats' leather and 45 Million foot^2 of sheep's leather. Figure 5 shows related photos for the tannery process in Jordan, and Figure 6 are some tannery products.

Figure6: Tanning Process in Jordan. (The Modern Company for Tanning)

Figure 6: The Jordanian Tanning Products. (Modern Company for Tanning)

The processes which have been used in Jordan are:

A) **Leather Preparation**.

Receiving the leather raw materials from slaughterhouses after slaughtering sheep, goats, and cows; then keeping them in chemical solutions:

- In salt (sodium chloride).
- With salt and boric acid.
- Drying after salting especially in the summer months.

Then exported to abroad such as Turkey, Lebanon, Egypt, India and Pakistan as they are dry or wet salted ore.

B) **Manufacturing.**

After the hair and adherent flesh are removed, the hides are sorted and trimmed, then stored in sodium chloride and washed using salt and the boric acid. After that drying by spreading under sunlight for long time.

Majority of these processed leather is exported abroad to Turkey, Lebanon, Egypt, India, and Pakistan as wet-salted ore.

1. The Pickled.

This is by removing the wool/ hair from the skins and safely-stored them in salt and acids. Then, they are ready to be exported abroad to Turkey, Italy, Lebanon, India,

Pakistan (stage), embalming

2. The Wet Blue.

Fabrication of the leather to provides the wet blue using chrome; treating the hides by enzymes, auxiliary tanning materials and chromium (III).

The Wet blue is also exported outside.

3. Crust.

Treating skins according to the final net color, using the tanning materials.

c) **Finishing preparation.**

This process happens usually in Jordan to enhance the leather softness, hardness, luster and water absorption.

The three processes of raw materials of natural leather (preparation, manufacturing, and finishing preparation) are carried out in Jordan in small scale because Jordan has no infrastructure or specialized zone equipped with water and electricity and a purification plant compatible with the tanning process of leather. So most processed leather is exported as salted leather. Jordan is not taking an advantage of the added value of huge quantities of leather-raw materials to create new employment opportunities for Jordanians and to meet the country's need for leather products from the natural leather from Jordan rather than imported products from outside, which can result in developing the industry in Jordan.

Manufacturing Imported Leather

Mainly leather manufacturers (finished leather and only prepared by cutting and designed) are 76. The average number of employees per factory is 4-5 workers. Only five factories have employee number more than 40. The Jordanian industries are classified to the following main categories:

1.Men\Women Shoes.

2.Sport Shoes.

3.Travel\Hand Bags.

4. Soles.

5. Heels.

6. Belts

Many of the leather Jordanian producers use imported raw material of leather; because it's ready to the secondary manufacturing process.

The main process steps by manufacturers are:

1. Designing based on product type, size, etc.
2. Cutting and forming pieces of leather as per the design / cutting machines.
3. Sewing of leather pieces by stitching / sewing machines.
4. Install accessories.
5. Assembly of shoe parts by glue / by manual operations or by presses.
6. Molding process for rubber soles; injection under high temperature.

Jordan used to have small-scale factories especially in leather tanning and processing of leather raw materials as wet-blue leather for export and national use to manufacture leather products. During the last two decades, the tanning companies in Jordan has decided to close its businesses due to many factors, mainly lack of water for leather tanning, lack of water treating plant to recycle water from tannery, low quality of the raw materials of animals skins and hides, the high cost of production due to an old technology used in the factories, lack of regulations and policies to protect the industry from the competition of the huge international producers. At the present, the number of company specialized in tanning leather-raw materials in Jordan is only one company (Jordan International Tannery), located in the industrial park at Ma'an Development Area The company has a capacity of processing more than 1,000,000 sqft. Of raw hides per month.

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Figure 7: Photo from the Jordan International Tannery company in Jordan.

III.II. Description of The Current Situation.

The Jordanian leather companies are divided to tannery and finishing leather products; 2 to 76 respectively. The 4 tannery companies nowadays mainly work to prepare the leather for the raw and salted stages and exported outside.

The main challenges face both sectors:

1) Due to the economic situation in Jordan and neighboring countries, most of customers focus on the quality of the final product, design and strongly interested to buy lower- price products, especially if they are more modern colors and designs.
2) The Free Trade Agreements are the governmental regulations and policies that make the competition between the imported and nationally produced leather shoes and bags, depends strongly on the low-price market.
3) The effluent of the tannery processes and the national lack of water, in addition to that the government doesn't allow to open new tannery companies due to the low efficiency of water treatment stations of the suggested companies.
4) Lack of machines for leather production.
5) High workers' salary.
6) The high cost of raw materials, because it's not national produce (such as: ties, molds, leather, etc.).

IV. Available Resources.

There are currently 80 leather companies, 2 of them currently work with very limited production capacity; 76 imported leather companies are for shoes, bags, etc.

The Jordanian Association for Manufacturers and Exporters of Footwear, the first national association, aims to organize the leather sector, manufacturers and exporters of footwear and leather industries in Jordan, increase the proficiency of the institutions working in the sector, upgrade the methods of production, marketing and export, reform the legislation, laws and regulations relating to the sector, conduct studies to promote investment opportunities, contribute to finding solutions to the problems facing the sector, and to take all the necessary measures to support the sector and its development and serve its members.

The Association supports students to get training at secondary technical school in Jordan. The Association has also bought new machines to help of its members to manufacturing leather products with high quality and low cost.

The Association performed the following training courses::

- Handmade shoe manufacturing.
- Handmade swelling of shoe manufacturing.

Association aim to buy the following machines:

1. shoe assembly machine
2. Insole machine.
3. Alfort machine
4. Heating machine of the shoe
5. Shoe heel stretch machine
6. machine pull the face of the shoe

7. Shoe cooling machine
8. program design, computer and scanners
9. Shoe Mold Making Machine

In general, for the leather sector, the training needs are:

- Physical and chemical tests on leather and related restricted materials.
- Physical, mechanical, chemical and finishing quality controls available.
- Environmental management, waste managements; specially for the tannery plants.
- Implementation of research and development R&D activities.
- Implementation of modern methods (designs and variety).
- Mold Production and design (for shoes).
- Advance products design (variety, models, etc. specially for shoes).
- Best of handmade production process practices.