
Investment Opportunities Map

Jordan Investment Board

Graphic Design and Printing Project

Pharmaceutical Sector

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The Project at a Glance	
Project Name	Graphic Design and Printing
Project Production Capacity	10 Million Units/ year
Manpower	21
Total Investment Cost	US\$ 2,349,000
Initial Working Capital	US\$ 122,000
Internal Rate of Return (IRR)	25.7 %
Breakeven Point	28 % of Production Capacity

Graphic Design and Printing Project

1. Introduction

1.1 Project Services and Description

The quality of printing on packages is a very important element in marketing products. For the Jordanian pharmaceutical industry, which exports 68 % of its products, the quality of packages is of utmost importance.

External packaging of pharmaceutical products comprises the following:

- The cardboard box of the drug unit.
- The internal leaflet of the drug.
- The information and instructions label of the bottled drug.

The proposed project aims to serve the pharmaceutical industries by providing them with high quality graphic design and printing for their packaging components.

The project's services will not be limited to the pharmaceutical industry, several manufacturers in many other sectors will need these services.

1.2 Potential Consumers:

- Pharmaceutical manufacturing companies.
- Cosmetics and toiletries producers
- Dead Sea products manufacturers.
- Food and other industries.

2. Market Aspects

2.1 Estimated Local Demand

The pharmaceutical sectoral study indicates that the average annual pharmaceutical production in Jordan was US\$ 188 million during the years 1999 – 2003 (Table 1)

Table (1)
Jordan's pharmaceutical production
(US\$ Million)

Year	Local market	Export	Total
1999	67.3	110.8	178.1
2000	62	108.4	170.4
2001	69.7	129.4	199.1
2002	50.5	143	193.5
2003	54.3	145.1	199.4
Average	60.8	127.3	188.1
%	32 %	68 %	100 %

Source: Pharmaceutical Sectoral Study

Contacts with pharmaceutical manufacturers and sector experts indicated that the total packaging cost in the pharmaceutical industry represents about 10 % of the sales price. Therefore, the external packaging cost could be estimated at 50 % of the total packaging cost. Consequently, the external packaging market size of the pharmaceutical sector could be estimated as follows:

$$188.1 \times 0.05 = \text{US\$ } 9.4 \text{ million.}$$

2.2 Forecasted Future Demand

The pharmaceuticals sectoral study indicates that the average annual consumption of drugs increased in Jordan during the years 1999 – 2003 by 7.4 %. Hence, it is estimated that the pharmaceuticals production in Jordan will continue to increase yearly by 7 %, and the demand for the packaging requirements will increase at the same rate (Table 2).

Table (2)
Forecasted Future Demand

Year	2005	2010	2015
US\$ Million	10.8	15.1	21.2

2.3 Competition

There are about 520 printing presses in Jordan. 76 % of them are located in Amman Governorate (Department of Press, 2003).

Most of the printing presses are small scale operations. There is a limited number of large scale and high quality establishments, of which competition with the project would come from.

2.4 Project Capacity

The current market size is estimated at about US\$ 10 million. The average cost of Over –The – Counter (OTC) drug pack is estimated at about US\$ 2 / pack. The estimated number of produced drug packs in 2003 is about 94 million, expected to reach 212 million packs in 2015.

Since the project will provide high quality graphic design and printed materials, its services should target the expensive drug segments. The proposed annual production capacity of the project is 10 million units of external packs, which represent about 5 % of the total market size in 2015.

The project production is expected to progress as shown in (Table 3):

Table (3)
Production Size Development

Year	Capacity Utilization	Million Units
1	50 %	5
2	70 %	7
3+	90 %	9

2.5 Projected Sales Revenues

Each external packaging unit includes a cardboard box, a leaflet and a label. The sales price of the external packaging unit is projected at US\$ 0.15. Thus, the estimated project revenues in the first year of operation will be about US\$ 750, 000.

Table (4)
Projected Revenues

Year	1	2	3
US\$ Thousand	750	1,050	1,350

3. Technical Aspects

3.1 Project Location

The location of the graphic design and printing project is proposed to be Amman Governorate (Industrial Cities) due to the following factors:

- Major potential clients are located in this area.
- Adequacy of industrial infrastructure.
- Availability of skilled and trained manpower.

3.2 Manpower

Table (5)
Manpower Requirements

Job	Required No.
General Manager	1
Administrative Clerk	4
Designer	2
Technician	6
Laborer	8
Total	21

The total annual salaries and wages of the above employees (including fringe benefits), in addition to overhead and administrative expenses are estimated at US\$ 153 thousand.

3.3 Land & Buildings

Table (6)
Land and Buildings Cost

Item	Area m ²	Cost US\$
Land (Industrial cities)	3,000	84,000
Buildings	2,000	280.000

3.4 Raw Materials

Cardboard, printing paper and self-adhesive paper are required for printing purposes. The estimated cost of paper and cardboard in the first year is about US\$ 150, 000. Printing ink, films and other printing consumables are also needed.

3.5 Technology

A major source of machinery and equipment is Germany.

4. Financial Aspects

Basic Assumptions

The financial analysis and indicators are based on the following basis:

1. Project operational life is 10 years.
2. Internal Rate of Return (IRR) is calculated at 100% equity ratios.
3. Income tax is calculated at 15% on net taxable income.
4. Net Present Value (NPV) is calculated at 12% discounted annual rate.
5. Initial working capital is based on the operating expenses needed for three months.
6. Operating expenses comprise raw materials, labor cost and overheads, utilities and other expenses.
7. Pre -operating expenses consist of studies fees, capital issue, licensing, training, trial operations and other similar expenses.

4.1 Project Investment Cost

Table (7)
Total Investment Cost

Item	US\$
Land	84,000
Buildings	280,000
Machinery & Equipment	1,500,000
Transport means	70,000
Sub- Total (Fixed Assets)	1,934,000
Contingency, (10%)	193,000
Pre – Operating Expenses	100,000
Initial Working Capital	122,000
Total Investment Cost	2,349,000

4.2 Financial Indicators

- ROI = 21.8 %
- IRR = 25.7 %
- NPV = 1.5 Million US\$
- BEP = 28% of Production Capacity
- Payback Period = 4 Years.