Ministry of Planning
Ministry of National Economy

Palestinian National Authority (PNA)

Feasibility Study
on
Agro-industrial Park Development
in
the Jordan River Rift Valley (Phase I)

Main Report

September 2007

JAPAN INTERNATIONAL COOPERATION AGENCY

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PREFACE

In response to a request from the Palestinian National Authority, the Government of Japan decided to conduct a feasibility study on Agro-industrial Park Development in the Jordan River Rift Valley in two phases and entrusted the study to the Japan International Cooperation Agency (JICA). This is the final report of the Phase I.

JICA dispatched a study team to Palestine over the period from March 2007 to August 2007. The Study team consists of KRI International Corp. and Nippon Koei Co., Ltd., headed by Mr. TADA Munenori as Team Leader.

The Study team held a series of discussions with the officials concerned of the Palestinian National Authority and other parties concerned, and conducted field surveys at the study area. Upon returning to Japan, the Study team made further studies and compiled the final results in this report.

It is hoped that this report will contribute to the promotion of the Agro-industrial Park and to enhancement of friendly relationship between Palestine and Japan.

I wish to express my sincere appreciation to the officials concerned of the Palestinian National Authority and all the people involved in the course of the Study for their close cooperation extended to the Study.

September 2007

IZAWA Tadashi,
Deputy Vice President
Japan International Cooperation Agency

September 2007

Mr. IZAWA Tadashi
Deputy Vice President
Japan International Cooperation Agency (JICA)

LETTER OF TRANSMITTAL

Dear Sir,

We are pleased to submit to you the Final Report for "The Feasibility Study on Agro-industrial Park Development in the Jordan River Rift Valley (Phase I)".

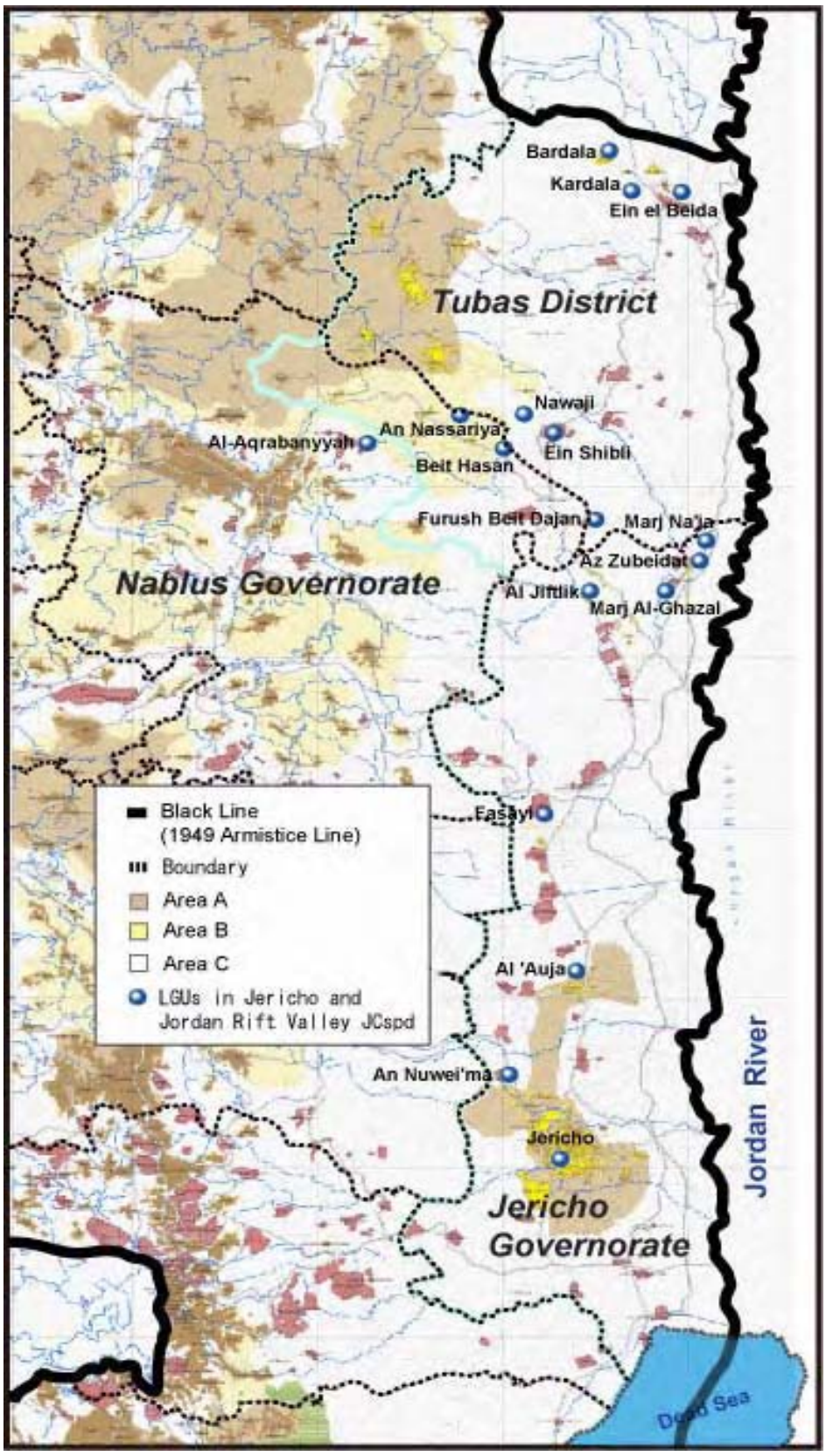
This Study has been conducted by the Study Team organized by KRI International Corp. and Nippon Koei Co., Ltd during the period from March 2007 to August 2007, in collaboration with counterpart experts assigned by the Ministry of National Economy and Ministry of Planning of Palestine.

The objectives of the Study are i) to select potential industries/products in Palestine, ii) to identify issues on investment environment, and iii) to study concept of the Agro-industrial Park Development, as a pre-feasibility level study. There were a series of discussions and exchange of views with the officials concerned of Palestinian National Authority and the private sector people of the Palestine and its surrounding countries in the course of the Study, in order to define the expected roles of the Park.

The Study Team wishes to express its heartfelt gratitude for the valuable assistance and cooperation received from the counterpart experts and public and private institutions during the execution of the field study in Palestine. The Final Report is the fruit of cooperation and collaboration of all the personnel that joined the Study.

Very truly yours,

TADA Munenori
Study Team Leader



Note: JICA Study Team arranged the map based on that originally prepared by OCHA

Study Area Map

FEASIBILITY STUDY
ON
AGRO-INDUSTRIAL PARK DEVELOPMENT
IN
THE JORDAN RIVER RIFT VALLEY
(PHASE I)

FINAL REPORT

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Abbreviations and Acronyms

AED	UAE Dirham
AFD	Agence Française de Développement
AIDS	Acquired Immune Deficiency Syndrome
AMA	Agreement on Movement and Access
AS	Agricultural Standards
B&C	Business and Commerce
BOD	Biochemical Oxygen Demand
BMI	Business Monitor International
CA	Civil Administration
c.i.f	Cost, Insurance and Freight
CIS	Commonwealth of Independent States
COGAT	Coordinator of Government Activities in the Territories
DCL	District Coordination Liaison
DDI	Domestic Direct Investment
EA	Environmental Assessment
EAC	Environmental Assessment Committee
EFTA	European Free Trade Association
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EIE	Erez Industrial Estate
EQA	Environmental Quality Authority
EU	European Union
EurepGAP	Euro-Retailer Produce Working Group Good Agricultural Practice
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
F/S	Feasibility Study
GAFTA	Greater Arab Free Trade Area
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GRDP	Gross Regional Domestic Product
GIE	Gaza Industrial Estate
GMP	Good Manufacturing Practice
GOI	Government of Israel
GS	Gaza Strip
HACCP	Hazard Analysis and Critical Control Point
HR	Harmonized System
HPC	Higher Planning Council
IC/R	Inception Report

IDF	Israeli Defense Force
IE	Industrial Estate
IEC	Israeli Electricity Company
IEE	Initial Environmental Evaluation
IEP	Industrial Estates Program
IFC	International Finance Cooperation
IMF	International Monetary Fund
IRR	Internal Rate of Return
ISI	Israeli Standard Institution
ISIC	International Standard Industrial Classification
ISO	International Organization for Standardization
IT	Information Technology
ITL	Income Tax law
JCspd	Joint Council for Services, Planning and Development
JDECO	Jerusalem District Electric Company
JEPA	Jordan Exporters and Producers Association for Fruits and Vegetables
JICA	Japan International Cooperation Agency
JIE	Jenin Industrial Estate
JRRV	Jordan River Rift Valley
JJRRV-DC	Jericho and Jordan River Rift Valley Development Committee
JST	(The) JICA Study Team
JWA	Joint Water Committee
KfW	Kreditanstalt für Wiederaufbau (Reconstruction Credit Institute)
LA	Local Authority
MENA	Middle East and North African
MFA	Multi-Fiber Agreement
MIGA	Multilateral Investment Guarantee Agency
MoA	Ministry of Agriculture
MoH	Ministry of Health
MoLG	Ministry of Local Government
MoNE	Ministry of National Economy
MoPIC	Ministry of Planning and International Cooperation
MoTr	Ministry of Transportation
MoTo	Ministry of Tourism
MTIT	Ministry of Telecommunications and Information Technology
NARC	National Agricultural Research Center
NGO	Non Governmental Organization
NIA	Nablus Industrial Estate
NIIC	Northern International and Industrial Company

NIS	New Israeli Shekel
NSU	Negotiation Support Unit
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
ODA	Official Development Assistance
O&M	Operation and Maintenance
PARC	Palestinian Agricultural Relief Committees
PCBS	Palestinian Central Bureau of Statistics
PEA	Palestinian Energy Authority
PEI	Palestinian Education Initiative
PENRA	Palestinian Energy and Natural Resources Authority
PFI	Palestinian Federation of Industries
PFIA	Palestinian Food Industries Association
PHAEI	Palestinian Higher Agency for the Encouragement of Investment
PIEDCO	Palestinian Industrial Estate Development and Management Company
PIEFZA	Palestinian Industrial Estates and Free Zones Authority
PIEFZL	Palestinian Industrial Estates and Free Zones Law
PIPA	Palestinian Investment Promotion Agency
PLA	Palestinian Land Authority
PLC	Palestinian Legislative Council
PLO	Palestine Liberation Organization
PNA	Palestinian National Authority
PPP	Public and Private Partnership
PS	Palestinian Standards
PSI	Palestine Standards Institution
PWA	Palestinian Water Authority
QIZ	Qualified Industrial Zone
R&D	Research and Development
SITC	Standard International Trade Classification
SMEs	Small and Medium Size Enterprises
SR	Saudi Riyal
SS	Suspended Solids
SWOT	Strengths, Weaknesses, Opportunities and Threats
TAMA	Hebrew acronym for additional rate of increase
TIE	Tarkumiya Industrial Estate
T-N	Total Nitrogen
T-P	Total Phosphorus
TOR	Terms of Reference
TPP	Tulkarm Peace Park
The Study	The Feasibility Study on Agro-industrial Park Development in the Jordan River Rift

	Valley
The Team	JICA Study Team (for The Feasibility Study on Agro-industrial Park Development in the Jordan River Rift Valley)
UAE	United Arab Emirates
UK	United Kingdom
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNIDO	United Nations Industrial Development Organization
URL	Uniform Resource Locator
USA	United States of America
USAID	United States Agency for International Development
USM	Union of Stone and Marble Industries
VAT	Value Added Tax
WB	West Bank
WBG	West Bank and Gaza
yr	Year
3R	Reduce, Reuse and Recycle

EXECUTIVE SUMMARY

Introduction

The "Feasibility Study on Agro-industrial Park Development in the Jordan River Rift Valley" (hereinafter referred to as "*the Study*") commenced with the initiative of the "*Corridor for Peace and Prosperity*" proposed by the Japanese Government on the occasion of the visit of then Prime Minister Koizumi to Palestine in July 2006. Under the initiative, a governmental consultation platform called the Four-Party Consultative Unit was set up involving Palestine, Israel, Jordan and Japan for the purpose of promoting confidence-building through economic cooperation.

The objective of this Pre-feasibility Study (Phase I) is to formulate an industrial development strategy and to conduct a pre-feasibility level study for industrial park development. The former focuses on priority industries and improvements in the investment environment while the latter addresses a set of essential factors for agro-industrial park development, such as development concept, functions, land use, on-site and off-site infrastructure and so forth.

The overall study consists of two phases, this Pre-Feasibility Study (Phase I) and the subsequent Feasibility Study (Phase II). This Final Report is prepared for Phase I to present the results of the study activities since the end of March 2007. In the course of the Study, the First Technical Level Meeting of the Four-Party Consultative Unit was held on 27 June 2007 for the purpose of discussing regional cooperation issues, where Palestine and Israel expressed different views on the site selection, especially relating to the issue of areas of jurisdiction[1]. The site selection was still under negotiation between the two parties as of July 2007.

1st Technical Level Meeting of the Four-Party Consultative Meeting by the Dead Sea, 27th June 2007

Potential Industries in Palestine

The primary objective of the industrial sector study is identification of potential industries which would contribute to the development of Palestinian industry by means of export promotion. Export promotion is an appropriate means in Palestine since the local market is too small, while diversification of export destinations has been progressing. In this regard, the Study focuses on potential export-oriented industries. In addition, due to the prolonged stagnation of the economy, unemployment has been a serious issue to be tackled in an effective way. Therefore, it is also expected that the export promotion will help to substantially alleviate the unemployment issue.

[1] There are three types of area, i.e. Area A, B and C, under the area jurisdiction. Area A is "Full Palestinian civil and military control". Area B is "Full Palestinian civil control and joint Israeli-Palestinian military control". Area C is "Full Israeli civil and military control". (Ref. UN Office for the Coordination of Humanitarian Affairs: OCHA)

After a series of data and information analyses, the Study tentatively identified seven (7) sub-sectors of the manufacturing sector as potential industries. They are classified into categories as follows, in accordance with their economic characteristics: i) promising industries, ii) labor intensive industries, and iii) capital intensive industries.

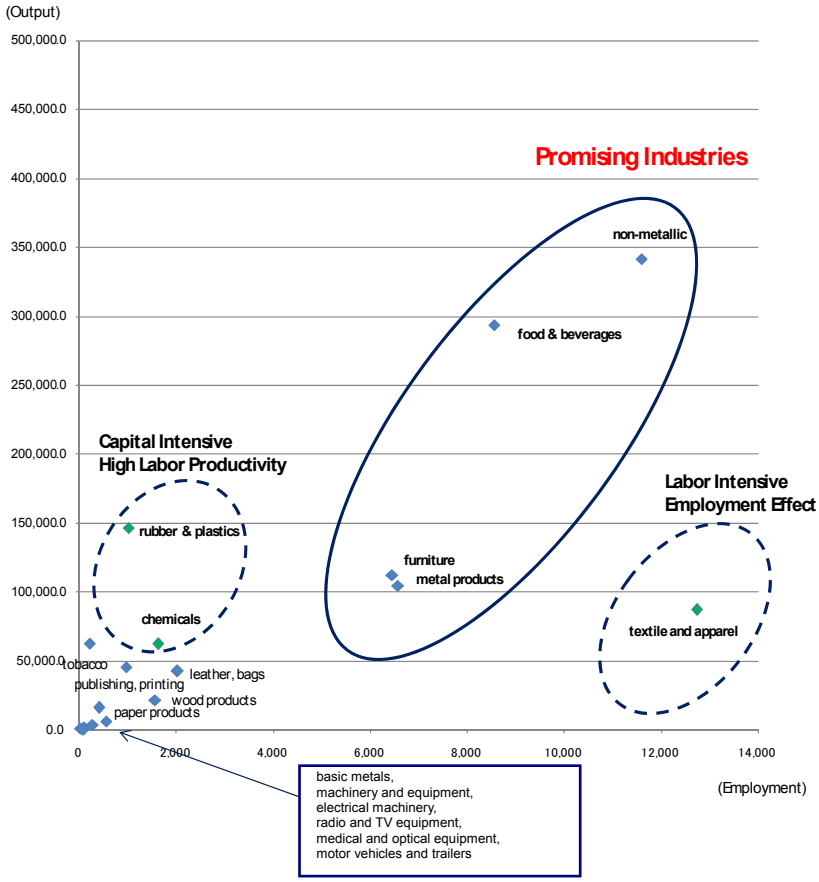


Figure 1 Criteria to Identify Potential Industries

Promising industries are characterized by high potential both in industrial output as well as in employment effect. Food processing, stone and marble, metal and furniture belong to the category of promising industry. The stone and marble industry is highly promising in terms of industrial output and employment creation, followed by the food processing industry. In addition, diversification of external markets has been achieved so far in food processing, stone and marble, and metal industries. While the furniture industry is heavily dependent on the Israeli market, a growth of export to Jordan has been observed in the recent two years.

Labor intensive industries contribute significantly to employment creation, though their economic output is relatively small. Textile and apparel is a typical labor intensive industry and the Palestinian textile and apparel industry has been largely dependent on the Israeli market. Most of the firms undertake subletting work from Israeli companies. Despite the employment effect, considering the higher level of wages in Palestine, this industry is losing its comparative strength.

Capital intensive industries produce large economic output, but make a limited contribution to employment. Rubber/plastics and pharmaceutical industries are typically capital intensive industries. The potential for growth of these industries is dynamic in terms of export performance and exploration of new markets overseas. The pharmaceutical industry has been successful in exporting generic drugs to the countries in North Africa, CIS (former Soviet Union), etc. On the other hand, despite the dependence on the Israeli economy, a high level of technology and availability of skilled labor sustains the rubber and plastic industry.

Agriculture shall be strategically prioritized in the light of total Gross Regional Domestic Product (GRDP) and its potential for employment creation, in addition to the seven (7) manufacturing sub-sectors. Although Palestine has relatively abundant production of fresh fruit, vegetables and field crops, its export of agricultural primary products has been negligible. Despite the limited export volume, high value-added (high market value) products, such as strawberries and cut flowers from Gaza and cherry tomatoes and sweet peppers from the West Bank are potential commodities to be promoted for export to the EU and Gulf countries.

Investment Environment

Before the second *Intifada* in September 2000, foreign direct investment was active enough and triggered off the increase in domestic direct investment during 1995-1999. Overseas Palestinians represented the biggest share of investment. After the second *Intifada*, the degradation in the investment environment seriously affected the flow of foreign direct investment. Nevertheless, domestic direct investment remains positive in the fields of industry, tourism and services. In the year 2005, US$400 million were invested in industrial projects like cement, construction, food, paper and packaging industries.

The Study has identified several issues and challenges for investment promotion based on the investment survey (106 samples) and the workshop where potential investors and stakeholders exchanged their views. As a result, issues and challenges are broadly classified into four (4) categories. They are i) legal issues, ii) financial sector, iii) impediments to investment promotion, and iv) free zone. These issues and challenges for the investment environment could be summarized as follows:

Workshop on Investment Environment at Amman, 26th July 2007

Legal issues

Despite the substantial effort to create a sound legislative framework, development and revision of legislation are required with respect to laws applicable to private sectors such as Civil Law, Commercial Law, Competition Law and the Foreign Trade Act. In addition, further text improvement is necessary since existing legislation suffers from overlap without referring to the cancellation of previous laws or provisions.

Financial sector

Banks are characterized by high liquidity and provide a number of financial products ranging from deposits to trade finance and mortgages. In spite of the relatively developed banking sector, most enterprises do not have bank credit, primarily because of high interest rates and high collateral requirements. In addition, free movement of capital and profits in areas such as full capital repatriation, unrestricted movement of foreign exchange, and free transfers of foreign currency, is also important.

Impediments to investment promotion

Political instability and movement restrictions have been highlighted as the major obstacles in the investment survey of the Study. About 90% of the survey samples (106) report political instability as the biggest obstacle, while about 70% of them report movement restrictions as the second biggest obstacle. Both impediments give rise to high cost in terms of risk and transaction cost.

Free zone

Free trade agreements with various countries make Palestine an attractive investment destination, in particular with its duty free market access. For encouraging local and foreign investment, having a free zone is an ideal, which guarantees the facilitation of transport to neighboring and international markets.

Industrial Development Strategy

Palestine needs a set of strategies for export promotion and investment promotion towards industrial development. Export promotion requires a practical market strategy for potential products and the enhancement of quality and product development on the supply side. Investment is a driving force of industrial development, so improvements in the investment environment will be vital for growth of potential industries. The Study proposes the industrial development strategy and expected missions of the agro-industrial park as follows.

Priority industries promotion

Palestine needs diversification of external market. Priority industries implicate those having export performance or potential in Jordan, the Gulf countries and the EU. The export strategy and promotion initiatives for the priority industries are summarized below.

Table 1 Export Strategy and Promotion Initiatives for Priority Industries

Priority industries	Export strategy	Promotion Initiatives
1) Agriculture	High price or value-added products	- EurepGap certificate - Distribution & logistics Center (sorting/packaging) - Association for export promotion - Agricultural Standard for primary commodities

2) Processed foods	- High quality of products (e.g. extra virgin olive oil) - *Halal* products matching Arab food requirements - Organic foods aiming at potential markets of healthy foods	- Public support for experimental laboratories for *Halal* or organic foods - Product development in quality and packaging
3) Stone & marble	Products with unique and custom-made design	- Vocational training for stone processing - Incentives to keep skilled labor
4) Pharmaceutical	Nutrient supplements	- A joint venture company for R&D
5) Metal Rubber/Plastics	Strengthening vertical linkages with Jordanian/GCC companies	- Certification of PS mark to enter Arab market as quality assured products

Source: JICA Study Team

The export strategies attach importance to high value-added commodities, new product segments and strengthening of linkages with foreign companies. Existing export products are generally less competitive in price because of the dependence on imported raw materials and relatively high wages and transportation costs. While new product segments and high value-added commodities are not generally competitive in price, these products are required to meet a high standard of quality and to adopt certain production methods as well as production technology.

Therefore, the promotion strategies emphasize quality standard, laboratory/pilot farm for product development, technical assistance and private sector cooperation for R&D. Establishment of an Agricultural Standard and improvement of Palestine Standards will be an indispensable step for exploring new export markets. Laboratory facilities are to be increasingly required for product development, which would be suitably supported by donors' technical assistance.

Investment promotion

The existing laws offer favorable incentives to investors, and the banking sector is relatively well developed. Thus, improvement in the investment environment shall be carried out in two (2) areas. One is free movement of goods and people and the other is a comprehensive strategy for investment promotion consisting of investment guarantee, possibility of a free zone and establishment of an "*Investment Promotion Unit*".

A practical approach to lessen movement restrictions would be a special agreement on free movement of goods applicable to industrial estates. A special agreement on free movement of goods implies relaxation of passage control on cargo at internal and international crossing points. To do so, a third party's involvement in security services would be essential in order to clear security concerns for Israel.

The high political risk in Palestine requires investment guarantees with sufficient coverage for foreign investors. There would also need to be an investment guarantee for domestic investors against political risk. Introduction of a free zone needs an agreement on various issues such as customs duties between Palestine and Israel.

To encourage foreign investors to invest in Palestine, the current promotion activities should be strengthened. Establishment of an "*Investment Promotion Unit*" attached to the Ministry of National Economy would be taken into consideration.

Missions of the agro-industrial park

The Study proposes that the agro-industrial park would have the following missions for the purpose of the promotion of export as well as investment in Palestine.

1) The park primarily aims at the promotion of priority industries that develop/produce new and high value-added products for regional and global markets. In addition, the park is expected to provide trade and logistics services functions so as to encourage private sector business opportunities abroad.

2) The park will be a flagship project to attract investors by providing a new investment environment. In this regard, periodical monitoring and feed-back will be necessary for the improvement of the park's operation and the creation of a preferable investment environment.

3) The park will be designed to trigger facilitation of regional cooperation among neighboring countries at different stages, such as business cooperation, product development, human resources development and free movement of goods and people.

Industrial Park Development

Assumption

The agro-industrial park is one of the major elements of the Japanese initiative of a "*Corridor for Peace and Prosperity*". The basic criteria for the agro-industrial park are given below.

- Location : Southern or eastern area of Jericho City
- Land Area : 50 ha for short to medium term, and another 50 ha for long term development
- No conflict in present land use (such as permanent land use and/or valuable buildings)
- Easy access to major arterial road
- Basic infrastructure attainable/ securable

Based on the result of the *Investment Demand Survey*, it is estimated that about 50 enterprises from inside/outside of the West Bank Area would invest in the Park, and they would be accommodated in an area of 50 ha (gross) in Phase I of the Park development.

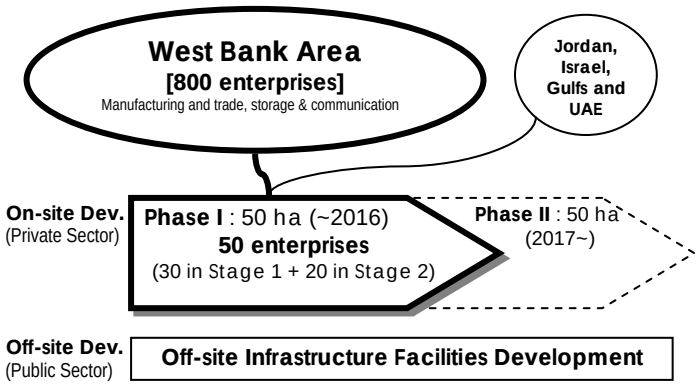


Figure 1 Principles for Scale, Stage and Actors of Development

Overall Concept

The overall concept of the agro-industrial park is "*Human Well-being*", and thus the park will deal in fresh agricultural produce, agro-industries, food processing and pharmaceutical industries.

The agro-industry park will be a thematic industrial park, where people have a variety of productive activities related to human well-being, including production and shipping, research and development, business and marketing, and life and leisure.

While a detail land use plan (site plan) needs to be formulated after the site is officially selected, a preliminary plan has been formulated as a reference.

The agro-industrial park shall have a parallel industrial road for exclusive use that connects to the existing national/regional arterial road, so that the additional traffic would not affect the existing local road network.

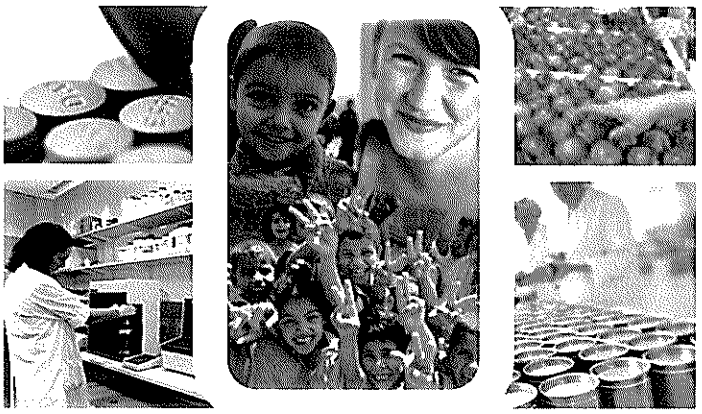


Figure 2 A Visual Image of Overall Concept

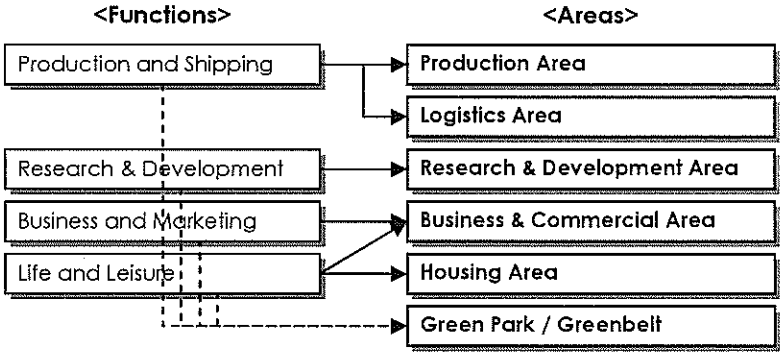
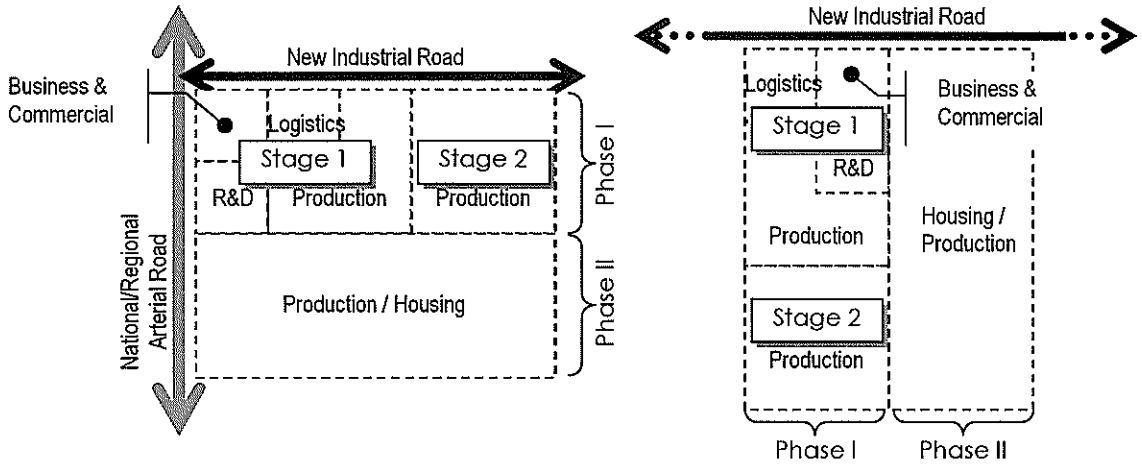


Figure 3 Four Functions and Six Areas of the Park



a) Direct connection w/ arterial road b) No direct connection w/ arterial road

Figure 4 Area Layout Patterns

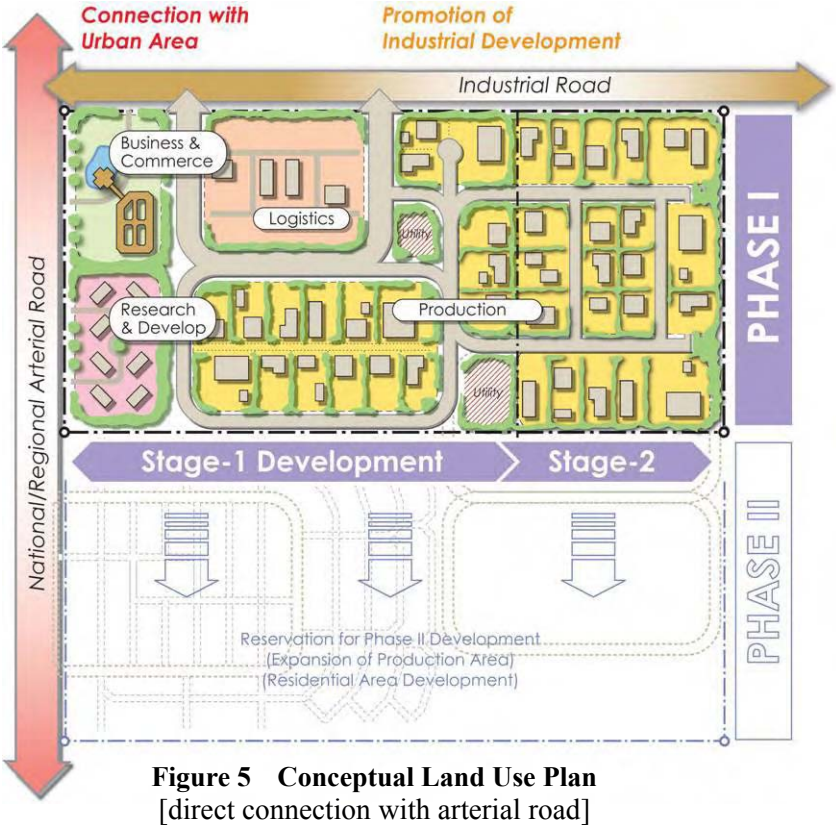


Figure 5 Conceptual Land Use Plan
[direct connection with arterial road]

On-site and Off-site Infrastructure

Engineering requirements have been preliminarily considered for the on-site and off-site infrastructure facilities at this stage, assuming the site shall be in the southern or eastern area of Jericho City.

Table 2 Engineering Requirements for On-site and Off-site Infrastructure

Infra. Item	On-site Infrastructure	Off-site Infrastructure
Road	✓ Two lanes for vehicular traffic with parking lanes on both sides, sidewalks, drains and greenbelts are proposed -20 m	✓ New road construction plan in the southern part of Jericho city. ✓ Access road from/to Route 90, Route 1 and Allenby Bridge need to be considered.
Water Supply	✓ Water demand of 1,200 m^3/day (0.45 MCM/yr.) could not be covered by the water from the Ein-El Sultan spring.	✓ Possibility to secure water from another water source (e.g. *Wadi Qilt*).
Power Supply	✓ Approximately 10 MVA of power is required for 50 firms/factories.	✓ The present capacity of 25 MVA plus additional 20 MVA from Jordan (JDECO).
Waste Water	✓ Individual treatment equipment shall be installed by tenants themselves, so that the effluent quality could meet the Palestinian Standard for discharge to public sewers.	✓ Jericho Municipality has a plan to develop the sewage network, which was proposed to the Japanese government as a grant-aid-project in 2005.
Solid Waste	✓ Needs coordination with the Municipality.	✓ Jericho dumping site has been improved since the middle of January 2007, with the technical assistance provided by JICA.
Storm Water Drainage	✓ On-site retention pond is a probable countermeasure.	✓ Needs to pay attention to *Wadi*s.

Expected Social Impacts

The expected social impacts of the agro-industrial park are predominantly positive. The generated new employment is expected to be 2,700 of direct employment and 4,000 of indirect. The average wage from the new employment (direct and indirect) will be US$37 million annually, which would contribute to the local economy substantially. The total export of the park is estimated to be US$110 – 130 million annually, or 15 to 20% of the total PNA export, which would contribute to the enhancement of the export capacity of PNA.

Implementation Schedule

After this Phase I of the Feasibility Study, the 2nd Four-Party Consultative Meeting is scheduled to be held in October 2007, where the land selection issue is expected to be concluded so that Phase II, a full-scale feasibility study, could follow promptly. The Phase II Study would cover more detailed engineering aspects after Phase I. Environmental Impact Assessment (EIA) shall also be conducted by the responsible authorities with basic design of the Park.

After a series of further studies, the first phase of the entire Park would be developed physically in a staged implementation after 2011, of which the first opening (30 ha) is scheduled to be by 2013 and the second opening by 2016.

For the smooth materialization of the Park, the parties and authorities concerned are requested to make prompt and appropriate decisions and coordinate with one another.

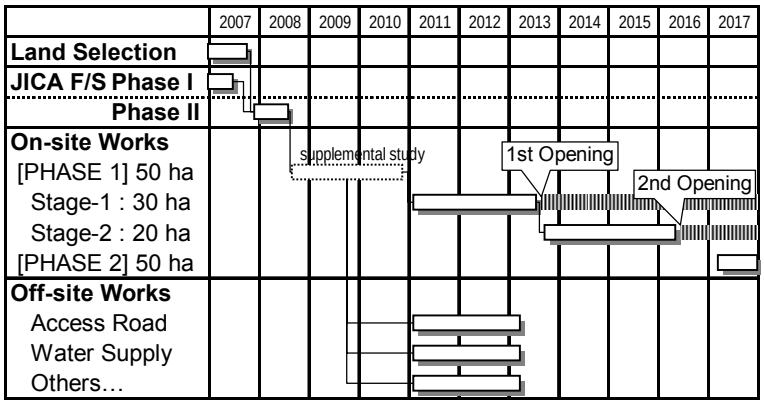


Figure 6 Project Implementation Schedule (tentative)

PPP for Implementation and O&M

In order for the agro-industrial park to be attractive, operational and sustainable, involvement of the private sector for the development and operation would be essential.

Basically the on-site development will be entrusted to a private sector developer, while the off-site infrastructure will be done by the public sector.

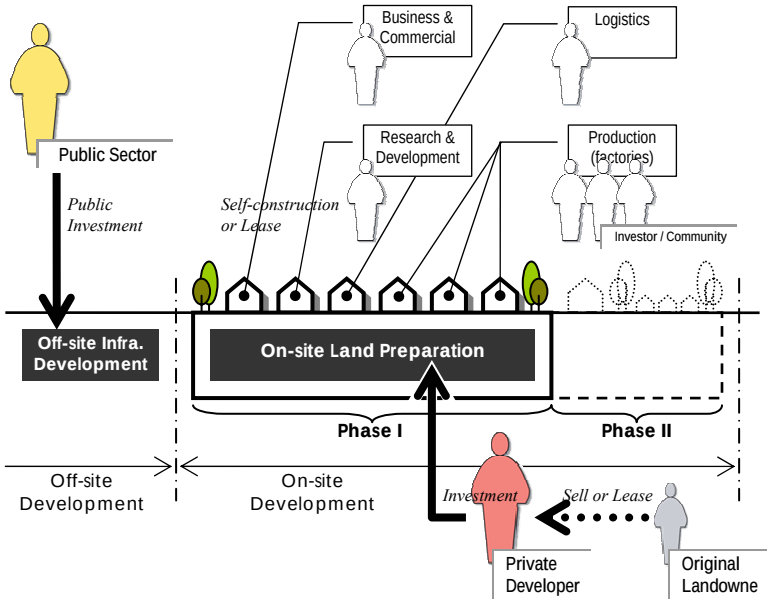


Figure 7 Schematic Image of PPP for the Park (Phase I)

As the political situation today is very complex and unpredictable, strong supportive measures from the public sector and international community will be essential.

Further Issues

Further issues will need to be addressed as necessary measures or actions for the subsequent step, the Feasibility Study (Phase II). Strengthening of the linkage between agro-industry and agriculture is also relevant to the agro-industrial park development. The Park will primarily focus on high value-added or new products using local resources. Market study and technical assistance for small farmers will be needed to fulfil the missions of the agro-industrial park. PNA would need to set up a new organizational framework to primarily negotiate regional cooperation issues with Israel.

Conclusions and Recommendations

The Study (Phase I) concludes that the agro-industrial park development will be the significant project to fulfill its missions in line with the industrial development strategy and the Japanese initiative of a "*Corridor for Peace and Prosperity*". Since regional cooperation issues definitely affect feasibility of the project in terms of investment demand and development cost, improvements in dealing with the issues will be vital for successful implementation of the agro-industrial park. Prior to the subsequent stage of the Study (Phase II), improvements in the following issues need to be discussed in the next Four-Party Consultative Meeting.

Improvements in movement restrictions

It is recommended that both Palestine and Israel resume discussion about a special agreement on free movement of goods and people applicable to an industrial park, which can be traced back to the ministerial agreement made in 1999 between the two parties. A third party's involvement in security services at the industrial park would soften Israeli security concerns and be vital to realize such a special agreement. An agreement should include relaxation of passage control on goods and people at commercial crossing points between the West Bank and Israel, which would propose delivery of goods without transshipment.

Transportation of goods at the Allenby Bridge (international crossing point) has been the matter of security[2] between Israel and Jordan. Cargo passage is currently controlled under the back-to-back system. High transportation costs are considered to be attributable primarily to the system. Therefore, an alternative method, such as the door-to-door system, shall be taken into account instead of the back-to-back system.

Site selection and access road

Site selection and an access road are the urgent matters necessary to be agreed between Palestine and Israel. Palestine, for the time being, has proposed an area adjacent to the iron factory as the development site, which is located in the southern part of Jericho City. This proposed site comprises Areas A and C, and Palestine

[2] There were several bridges on the Jordan River between Israel and Jordan, which had been in operation up until several years ago, but at present only Allenby Bridge (on the Israeli-Jordanian border to the east of Jericho) and Sheikh Hussein Bridge (on the Israeli-Jordanian border to the east of Beit She'an) are in service. The former bridge allows Palestinian to pass through during the daytime, while it is closed at night time for security reasons. On the other hand, the latter bridge is open for 24 hours a day, but only for non-Palestinian.

needs Israeli agreement on Area C where the industrial park could be further expanded. An access road connecting to Route 90 could be the most cost-effective way[3], but it would be a matter of concern to the Israeli security control. The access-road issue also needs to be discussed, together with improvements in movement restrictions.

The investment demand survey identified impediments to investment promotion. While the Four-Party Consultative Meeting is directed to improving the investment environment (improvement of ease of movement and establishment of a free-zone), the following actions will be necessary to sustain feasibility of the agro-industrial park project.

Investment Promotion

It is recommended that PNA create an "*Investment Promotion Unit*" attached to a minister of the Ministry of National Economy. The Unit will provide investors with a set of necessary information including land, financial incentives, local investor as a partner, legal consultation and so on. It is also recommended that the Feasibility Study (Phase II) includes investment promotion as part of its scope of work, which assists PNA in establishment of the Unit and appointment of competent staff from the relevant stakeholders like MoNE, PIPA, PIEFZA and the private sector. Preliminary investment promotion activity shall be undertaken in the Phase II Study in cooperation with the Unit.

[3] Suppose a land in the southern or eastern part in the suburbs of Jericho City is selected for the Project site, a new access road directly connecting the land to Route 90, which runs to north and south along the Jordan River in the east of Jericho City, would be the shortest path.

CHAPTER 1 INTRODUCTION

1.1 Background

On the occasion of the visit of then Prime Minister Koizumi to Palestine in July 2006, the Japanese Government proposed the initiative "*Corridor for Peace and Prosperity*" to promote regional development. Under this initiative, a governmental consultation platform has been set up involving Palestine, Israel, Jordan and Japan for the purpose of promoting confidence-building through economic cooperation in the region. This concept aims to create stability in the region surrounding Palestine.

"*Feasibility Study on Agro-industrial Park Development in the Jordan River Rift Valley*" (hereinafter referred to as "the Study") constitutes one of major core inputs under the Japanese initiative. This Study consists of two phases, the Pre-Feasibility Study (Phase I) and the full-scale Feasibility Study (Phase II), of which the objectives of Phase I are as shown below. This Report is prepared for Phase I, as the final output after commencement of the Study at the end of March, 2007.

<Objectives of the Phase I Study>

Objectives 1: Baseline survey for industrial development strategy

To conduct baseline survey before the Phase II Study so as to develop an industrial strategy in the Jordan River Rift Valley (JRRV) and to select the site and set forth the strategies and preconditions for the Phase II.

Objectives 2: Pre-feasibility Study for industrial park development

To conduct a pre-feasibility study for the development of an industrial park in the JRRV.

Objectives 3: Technology transfer to Palestinian counterparts

To carry out a technology transfer to Palestinian counterparts through on-the-job training in the course of the Study.

During the course of the Study, the First Technical Level Meeting of the Four-Party Consultative Unit was held on 27th June 2007 on the Jordanian shore of the Dead Sea and the different views on the industrial park candidate site between Palestine and Israel became obvious in the meeting. A workshop on investment environment was also held on 26th July 2007 in Amman, Jordan with the participation of private sectors from Palestine and Jordan only. In the workshop, discussion was made between participants and the Study team on (1) potential industries/products, (2) issues and challenges for investment, and (3) expected functions and services in the industrial park.

As revealed in the First Technical Meeting of the Four-Party Consultative Unit, the site selection has been a very hot issue between Palestine and Israel. While there seems to be an implicit agreement on the Jericho area, there is a different view on whether the site may include Area C or not. The site selection has been under negotiation between the two authorities and should be cleared before the Phase II of the Study commences.

1.2 Framework of the Study

The Pre-Feasibility Study (Phase I) primarily aims at formulating an industrial development strategy and an industrial park development. The conceptual framework of the Study is shown in Figure 1.1.1, which is largely divided into four steps.

In the first step, an industrial sector study and an investment environment study are conducted as a baseline survey. The former examines present and future perspectives of the industrial sector, whereas potential products are also identified. The latter is based on the overview of investment trend, and issues and challenges for the investment promotion.

The result of the baseline survey leads to the second step for formulation of an industrial development strategy. The strategy focuses on priority industries promotion, investment promotion and missions of the industrial park.

Thirdly, the industrial development strategy is reflected in the industrial park development. While the site selection is under discussion, various issues for the industrial park development such as basic principles of the development, concepts, function and areas, land use plan, off-site infrastructure, socio-economic impact and issues for implementation are examined. At the same time, information collection and consultations are made in terms of legal issues, and environmental and social considerations.

Final step is to identify further issues to be considered in the Phase II Study. The Study identifies issues such as promotion of agro-industry, incentives for investment and regional cooperation issues.

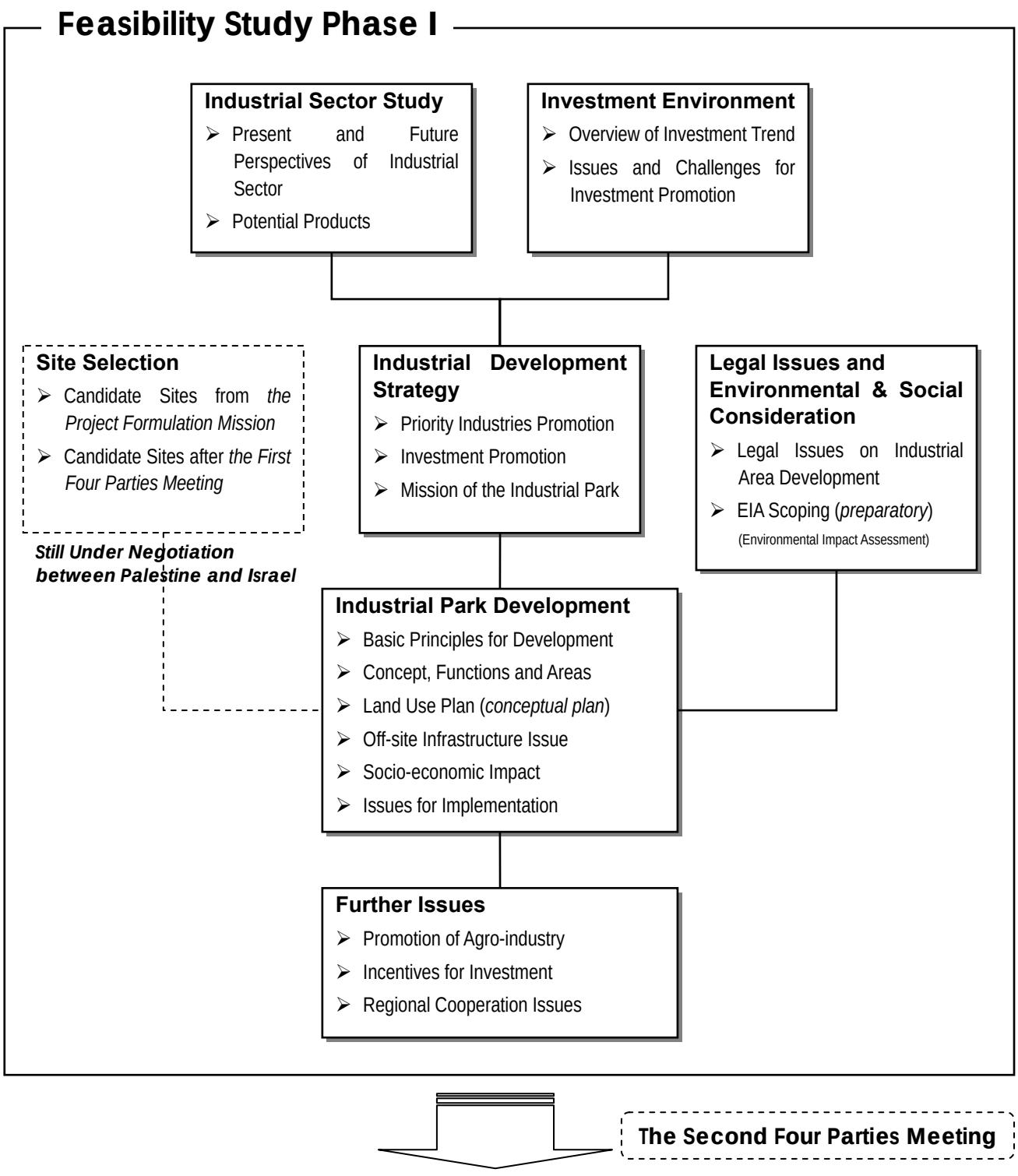


Figure 1.1.1 Framework of the Study

CHAPTER 2 INDUSTRIAL SECTOR IN PALESTINE

2.1 Overview of Industrial Sector in Palestine

2.1.1 Overview

In the Palestinian economy, the role played by the industrial sector remains limited. Agriculture and Fishing produced 7% of the GDP in 2005[1] and Mining, Manufacturing, Electricity and Water Supply produced 12.7%. For development of the industrial sector, it is crucial to strengthen the manufacturing sector. Gross output of the manufacturing sub-sectors in 2005 is shown in Figure 2.1.1. The sub-sectors which produced the output of more than US$250 million are only two sectors: food and beverages (food processing industry), and non-metallic products (stone and marble industry). When it comes to the output of above US$100 million, rubber and plastic, furniture and metal products sectors appear on the list.

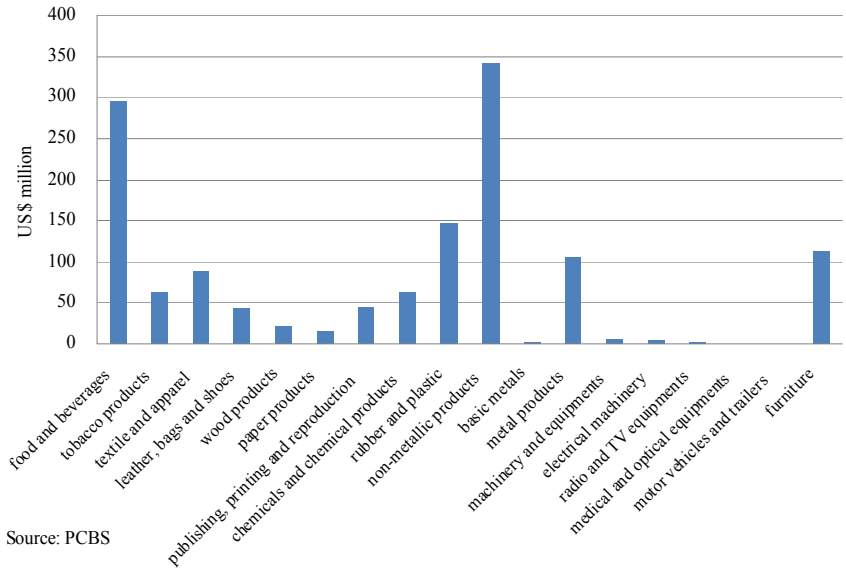


Figure 2.1.1 Gross Output of Manufacturing Sector, 2005

One of the objectives of the industrial development is to create employment opportunities. The biggest employment opportunities are provided by textile and apparel, and non-metallic products sectors creating nearly 12,000 jobs respectively. In addition, food and beverages, metal products and furniture sectors created between 6,000 and 8,000 jobs respectively.

[1] *Palestine in Figures 2005*, PCBS, May 2006

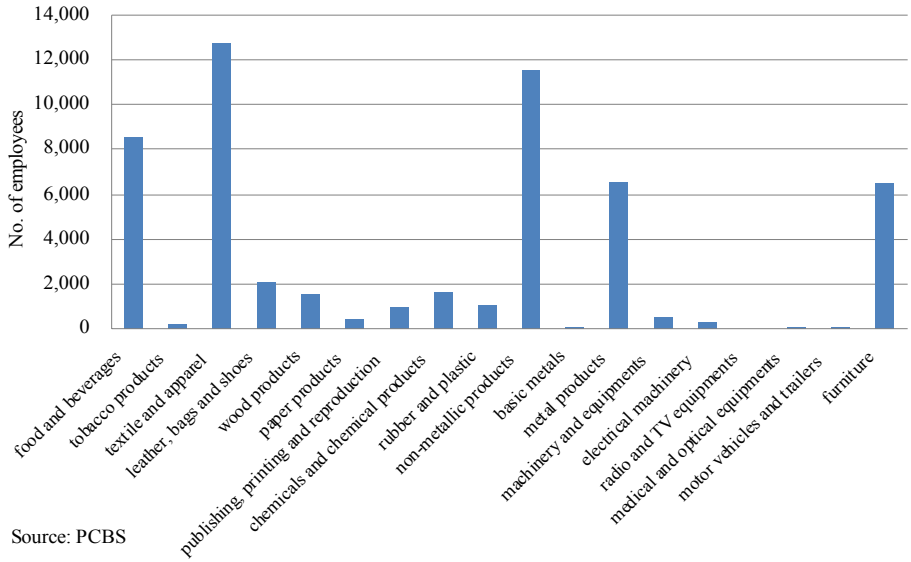


Figure 2.1.2 Employment of Manufacturing Sector, 2005

Another concern about the industrial sector in Palestine is the low level of labor productivity. Without efficient use of technology and skilled labor forces, labor productivity is very low in general. Other than tobacco products and rubber and plastic sectors with relatively higher labor productivity, the output per worker is below US$30,000 in most sub-sectors and the added value per worker remains much lower. It should be noted that the pharmaceutical industry which is included in chemical and chemical products sector is characterized by higher labor productivity. Despite the limited output and employment effect, because of a small number of companies (six) in the pharmaceutical industry, its labor productivity reaches nearly US$45,000 and largely exceed the average labor productivity of the manufacturing sector of US$24,630

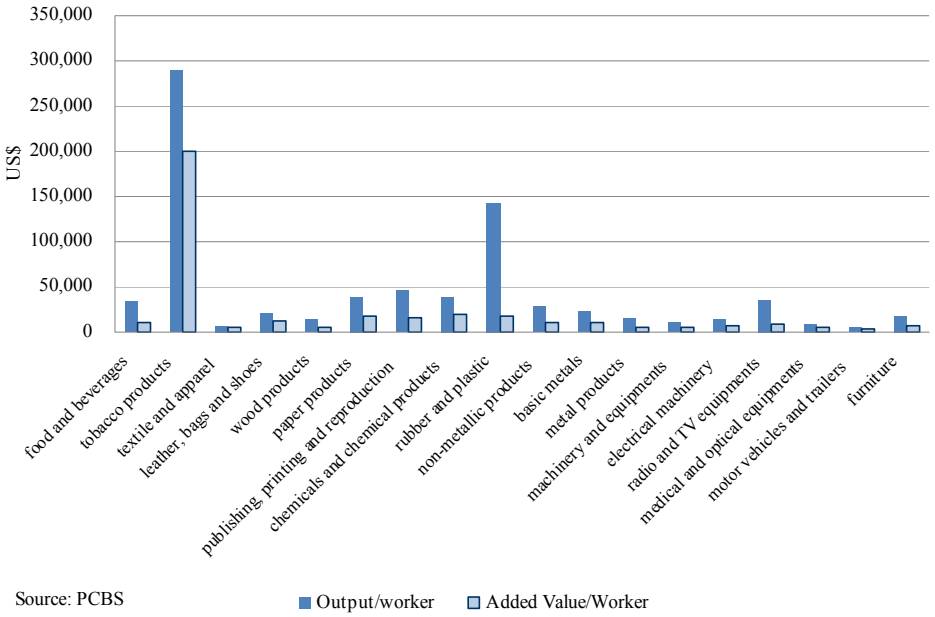
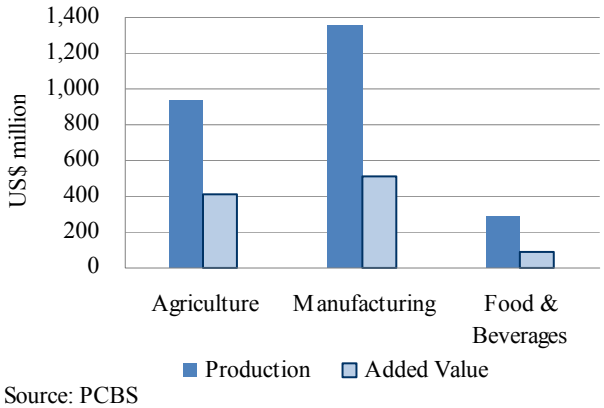


Figure 2.1.3 Labor Productivity of Manufacturing Sector, 2005

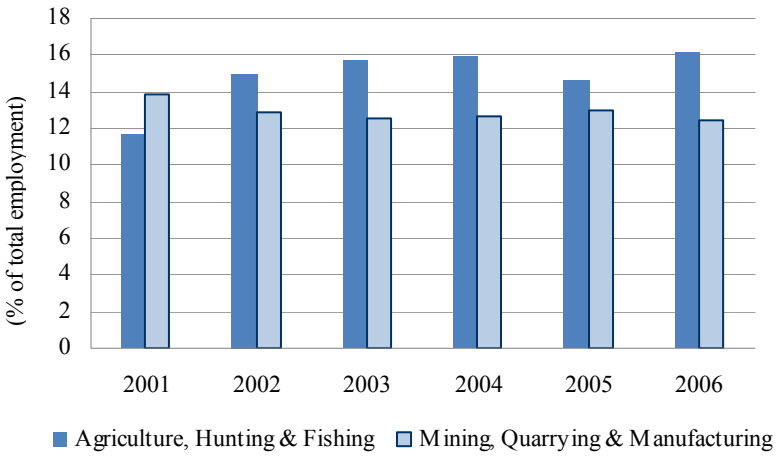
In addition to manufacturing, agricultural sector is an important pillar of the industrial sector in Palestine. As seen in the comparison below, the agricultural sector produces more than US$900 million in production and above US$400 million in added value, which are comparable to those of the manufacturing sector as a whole.



Source: PCBS

Figure 2.1.4 Comparison of Production and Added Value, 2005

Agriculture is an important sector in terms of employment, too. Agriculture, hunting and fishing sector provides 16% of the total employment in 2006, while mining, quarrying and manufacturing provides 12.4% of the total. Though the manufacturing sector created more jobs than the agricultural sector in 2001, the latter has been providing greater employment opportunities since 2002.

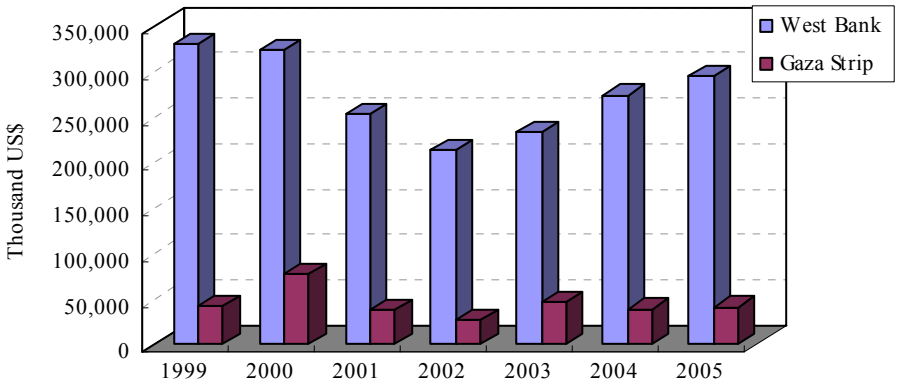


Source: PCBS

Figure 2.1.5 Comparison of Employment, 2001-2006

2.1.2 Export Performance

As shown in the following figure, the total value of exports of goods from the West Bank and Gaza Strip reached US$400 million in 2000 but decreased in the following two years together with the economic decline induced by the second Intifada in September 2000 and the ensuing closures and movement restrictions. Since 2002 the total value of exports has been growing onward again and it accounted for US$335 million in 2005. From 1999 to 2005, almost 90 % of the total export consisted of the products from the West Bank.



Sources: 1999-2000: *Foreign Trade Statistics*, PCBS, 2000
2001-2004: assumed from the exit passage. *Foreign Trade Statistics*, PCBS
2005: based on actual export data provided by PCBS

Figure 2.1.6 Export of Goods (West Bank and Gaza Strip), 1999-2005

Israel is the main trading partner for Palestine. Almost 90% of the total Palestinian exports are destined to Israel. However, the percentage share of Israel is slightly declining whereas the shares of Jordan, European countries and Gulf countries are increasing as shown in the following table.

Table 2.1.1 Percentage Share of Export from Palestine by Country/Area

	1999	2000	2001	2002	2003	2004	2005
Israel	96.85%	92.23%	94.02%	89.81%	91.53%	89.91%	86.62%
Jordan	2.27%	2.04%	3.82%	5.05%	3.86%	3.81%	5.21%
Europe	0.41%	0.41%	0.84%	3.80%	2.66%	2.28%	3.50%
Gulf Countries	0.30%	5.18%	1.15%	1.05%	1.24%	1.60%	1.39%
Other Arab League Countries	0.10%	0.05%	0.07%	0.17%	0.25%	0.78%	1.11%
North and South America	0.02%	0.02%	0.04%	0.08%	0.34%	0.54%	1.29%
Asia	0.01%	0.01%	0.01%	-	0.05%	0.21%	0.21%
Other Countries	0.04%	0.07%	0.05%	0.04%	0.07%	0.41%	0.68%
Unidentified	-	-	-	-	-	0.45%	-

Source: PCBS (unpublished data)

Gulf Countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, UAE

Arab League Countries: Algeria, Comoros, Djibouti, Egypt, Iraq, Lebanon, Libya, Mauritania, Morocco, Somalia, Sudan, Syria, Tunisia, Yemen

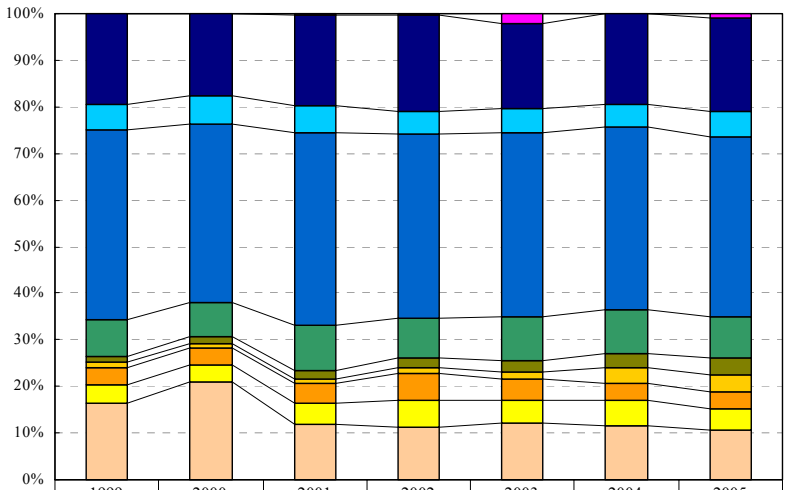
In the meantime, the diversification of export market is in progress for major exporting products over the last years. The number of export destination countries is increasing as shown in the following table.

Table 2.1.2 Number of Export Destination Countries, 1999-2005

	1999	2000	2001	2002	2003	2004	2005
Fruits and Vegetables- Fresh	4	4	8	17	20	19	15
Fruits and Vegetables- Processed	3	2	3	2	6	3	15
Processed Meat Products	7	7	7	6	7	5	8
Olive Oil	6	4	6	10	14	19	22
Stone and Marble	12	9	13	11	16	22	24
Pharmaceutical Products	7	3	5	2	5	9	7
Furniture	2	2	2	3	3	7	5

Source: PCBS

The Share of exported groups of commodities according to Standard International Trade Classification (SITC-3) is as follows.



	1999	2000	2001	2002	2003	2004	2005
Commodities and Transactions Not Classified Elsewhere	0.11%	0.05%	0.18%	0.21%	2.03%	0.01%	0.98%
Miscellaneous Manufactured Articles	19.22%	17.61%	19.46%	20.69%	18.24%	19.55%	19.91%
Machinery and Transport Equipment	5.58%	5.98%	5.83%	5.00%	5.28%	4.72%	5.52%
Manufactured goods Classified Chiefly by Material	40.64%	38.23%	41.49%	39.43%	39.52%	39.24%	38.69%
Chemical and Related Products, n.e.s	8.13%	7.41%	9.50%	8.41%	9.31%	9.41%	8.61%
Animal and Vegetable Oils, Fats and Waxes	1.11%	1.43%	1.98%	2.37%	2.58%	3.18%	3.66%
Mineral Fuels, Lubricants and related Materials	1.33%	0.92%	0.74%	1.03%	1.38%	3.36%	3.64%
Crude Materials, Inedible, Except Fuels	3.60%	3.91%	4.44%	5.97%	4.78%	3.55%	3.92%
Beverages and Tobacco	3.91%	3.39%	4.64%	5.67%	4.64%	5.51%	4.27%
Food and Live Animals	16.36%	21.09%	11.74%	11.22%	12.24%	11.47%	10.79%

Source: PCBS

Figure 2.1.7 Percentage Share of Export from the West Bank and Gaza Strip by Group of Commodities, 1999- 2005

The main groups of exported commodities are:

- Manufactured goods classified mainly by materials (which include stone and marble)
- Miscellaneous manufactured articles (which include furniture, footwear, etc)
- Food and live animals (which include vegetables and fruits)
- Chemicals and related products (which include medicine, plastics etc.)

Percentage shares of above four groups of commodities in the total value of export have not

been drastically changing since 1999 to today, and thus it is considered that the main exporting industries had already been established by 1999 and they have not changed since then. However, the share of food and live animals almost halved from 2000 to 2001[2], that implies a negative impact of reinforced movement restrictions imposed after the Intifada.

2.1.3 Identification of Potential Industries

One of the Study objectives is to identify potential industries in Palestine. To prioritize certain industries with their potentiality to contribute to the industrial development, particularly by means of the export promotion, following criteria are adopted in the Study to select potential industries.

First of all, potential industries should be ***those with significant effect on economic and social development of Palestine.***

Secondly, ***industries with higher labor productivity are promising*** even if they do not meet the above mentioned criterion.

Thirdly, the export promotion is necessary since the local market is small and the proximity to the growing external market such as the Gulf countries is an advantage. Therefore, ***industries producing exportable products are targeted***.

According to the above mentioned criteria, food and beverage (food processing industry), non-metallic products (stone and marble industry), furniture and metal products sectors could be regarded as promising industries, since they have significant effects on the economic performance of Palestine and the creation of employment opportunities. Textile and apparel sector is important in terms of the employment effect, though its economic output is quite limited. On the other hand, rubber and plastic, and pharmaceutical (included in the chemical sector) sectors are characterized by higher labor productivity with limited employment effect. In addition, as stated earlier, agriculture should be included in potential industries, because of its significant economic and employment effect.

[2] According to the data of PCBS, exceptionally great amount of oranges (the value of US$130,000) are exported to Saudi Arabia. It contributes the high value of export of food in 2001.

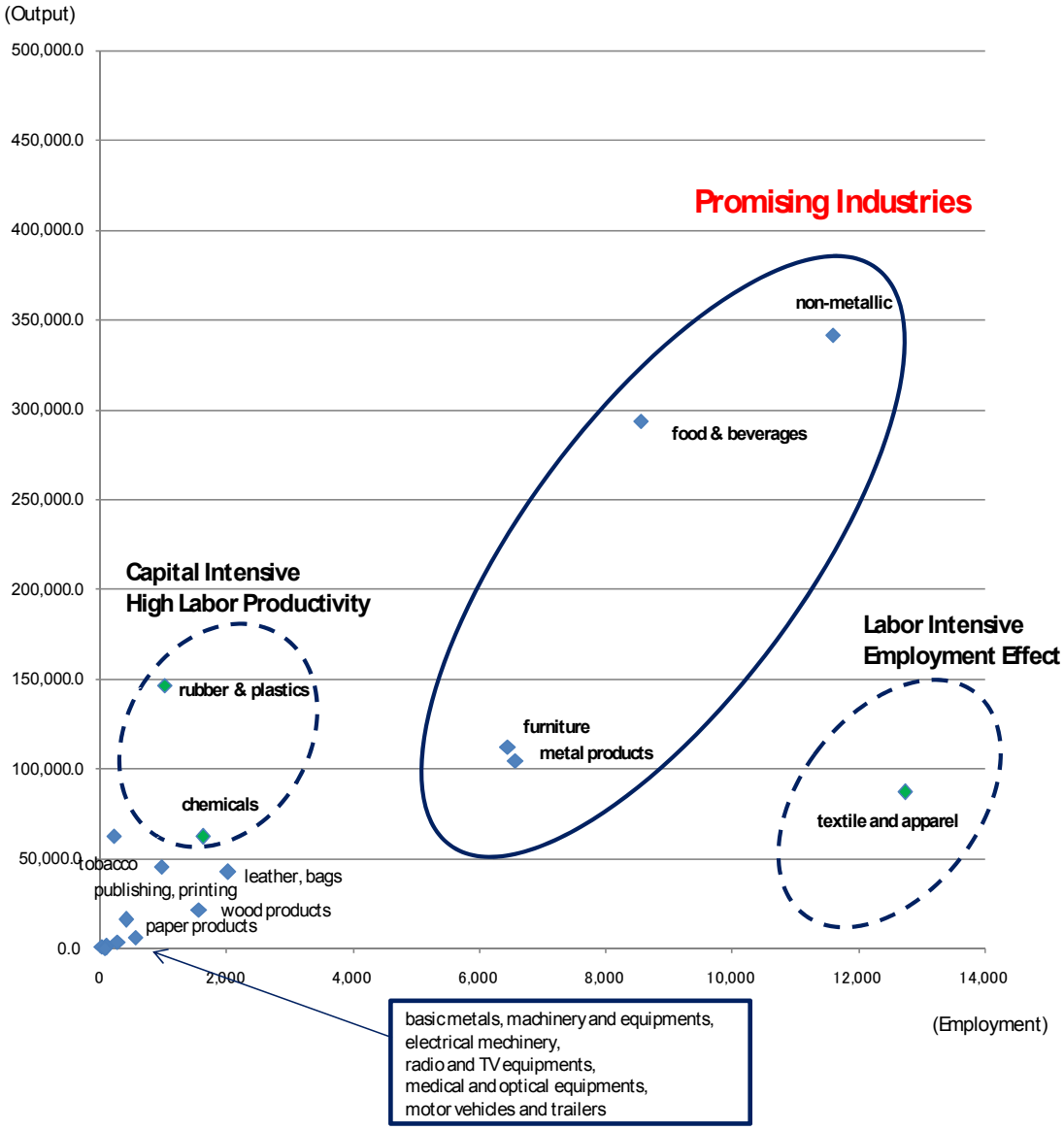


Figure 2.1.8 Criteria to Identify Potential Industries

Table 2.1.3 Potential Industries in the Study

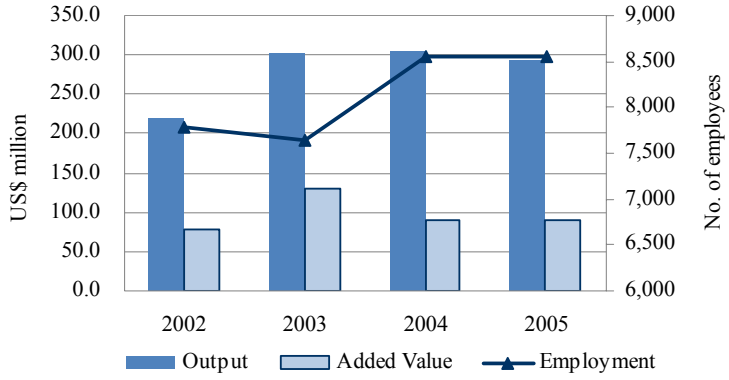
	Output	Employment	Labor Productivity	Export
Food Processing	✓	✓		✓
Stone and Marble	✓	✓		✓
Furniture	✓	✓		✓
Metal Products	✓	✓		✓
Textile and Apparel		✓		✓
Rubber and Plastic	✓		✓	✓
Pharmaceutical			✓	✓
Agriculture	✓	✓		✓
Tobacco			✓	
Leather, Bags				✓
Wood Products				✓
Paper Products				✓

2.2 Potential Industries in Palestine

2.2.1 Food Processing

(1) Overview

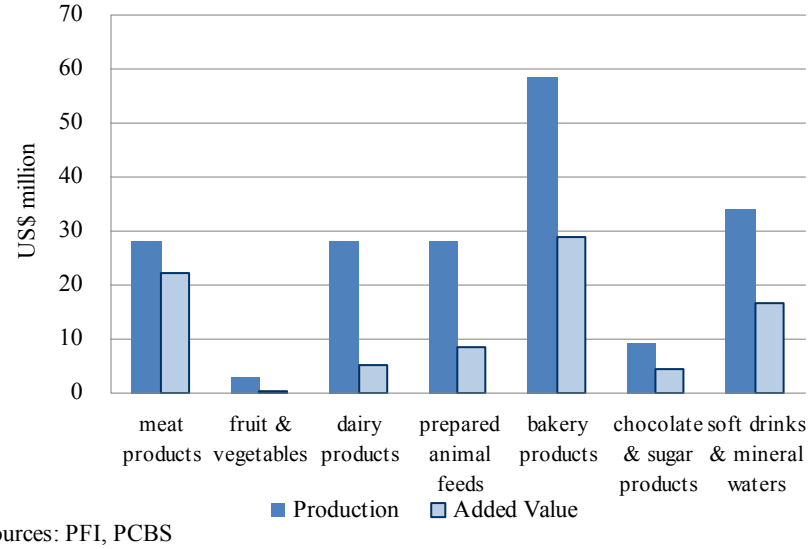
Food processing industry is one of the major industries in Palestine, which produces 22% of the total output and 16% of the total employment in manufacturing sector in 2005. The output increased in 2003 and remains high by producing around US$300 million every year. Similarly, the added value grew up to US$130 million in 2003, but has declined to US$90 million in 2004 and 2005. Employment opportunities provided by food processing industry has been growing, reaching 8,500 jobs in 2005.



Source: PCBS

Figure 2.2.1 Output, Added Value and Employment, 2002-2005

Food processing industry produces a variety of products such as packaged and canned vegetables/fruits, processed meat, dairy products, confectionaries and beverages. As shown below, while bakery products marked the largest production, meat products and beverages (soft drinks and mineral waters) produce large added value to production. Processed meat is higher added value product in Palestine and its export has been growing in Jordan and the Gulf countries.

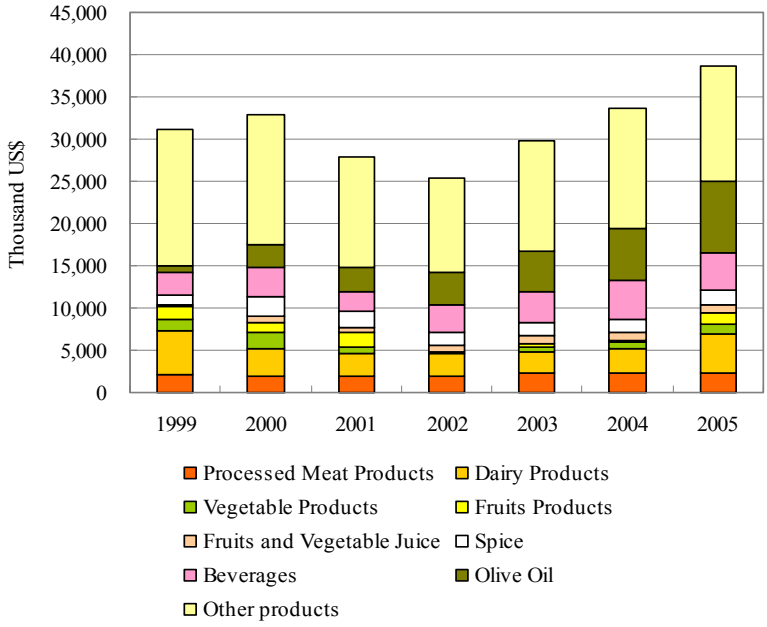


Sources: PFI, PCBS

Figure 2.2.2 Production and Added Value, 2003

(2) Export Performance

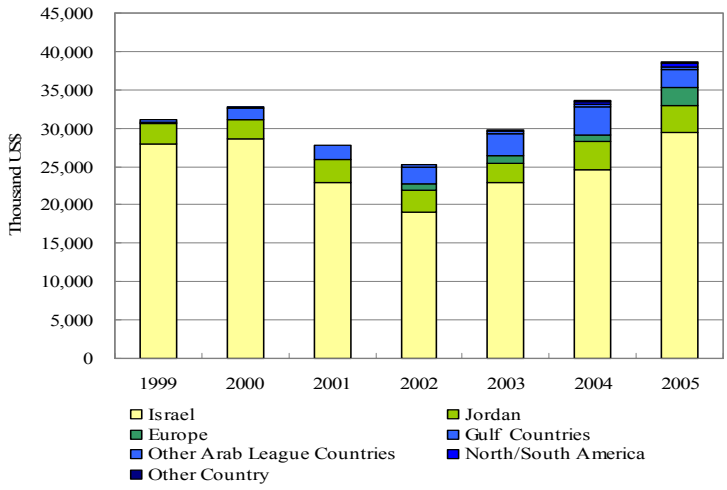
Palestine is exporting variety of processed food products including processed meat products, dairy products, vegetable and fruits products (such as pickles, canned vegetable, vegetable paste, jam and juice), spices, beverages and olive oil. Some products such as meat products and olive oil have been increasing its export in recent years in spite of unstable social and economic conditions after 2001.



Source: PCBS

Figure 2.2.3 Palestinian Export of Processed Food Products, 1999-2005

In terms of destination countries, Israel and Jordan take most of the share. However, the destination countries are expanding to the Gulf countries, other Arab League countries and in recent years to European countries, led by some growing products such as meat products and olive oil.



Source: PCBS

Figure 2.2.4 Palestinian Export of Processed Food Products by Destination Country/Area, 1999-2005

(3)-1 Analysis of Competitiveness

(a) Price Competitiveness

Food processing industry is a sector which takes advantage of domestic primary products such as vegetables, fruits and dairies. Availability of domestic resources is one of the important elements of competitiveness. When local agricultural primary products such as vegetables and fruits are used as raw materials, the food processing industry could become more sustainable as well as competitive. Olive oil and traditional herb products are promising in this respect. However, most of the raw materials for processed food are currently imported from abroad whose cost reaches about 70% of the total cost[3]. Unstable supply of raw materials caused by movement restrictions as well as sudden closures leads to limited utilization of production capacity, which is around 60% according to *the Palestinian Food Industries Association* (PFIA). Machinery and equipment for production and packaging materials are also imported and costly, whereas wages are higher in Palestine compared to neighboring countries like Jordan. All of these factors result in higher price of the products.

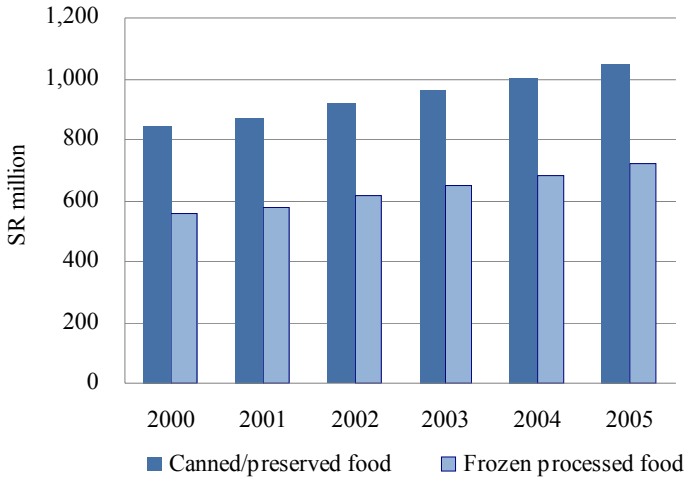
(b) Quality Competitiveness

Most of companies in Palestine are small-sized and family-owned, which means in general they have limited capacity for quality improvement as well as product design and product development according to market trends or consumer preferences. However, food processing industry has been making a great effort to improve the quality of products. While many food processing companies have quality mark certified by *the Palestine Standards Institution* (PSI), some companies even obtain internationally recognized certificate such as ISO. Processed meat (mortadella) is a good example with internationally high quality standard. Currently, three processed meat companies in Palestine already obtained ISO22000 which assures both quality and security standards covering HACCP (Hazard Analysis and Critical Control Point). With ISO22000, the products are entitled to enter European markets. In accordance with increasing global awareness of food security and quality management, such high quality assured products are the most promising in the sector. As for traditional food products such as za'tar[4], sumak[5], freekeh[6] and couscous[7], the quality based on the traditional and organic production method is highly esteemed by the Arabic communities in the region. Extra virgin and virgin olive oil produced in Palestine is also recognized as high quality product with additional value of product from "Holy Land". Palestinian olive oil, za'tar, freekeh and couscous have been already exported to the European market where consumers are very keen on food quality and security.

[3] *The Palestinian Processed Food Sector: Trade Development Strategy*, PalTrade and PFIA, 2004
[4] Za'tar is made of thyme and a mixture of sesami and sumak. It is often served with olive oil and bread.
[5] Sumak is sour taste ground powder (spice) with red color, made from a shrub. It is used for flavoring meat, fish and vegetables.
[6] Freekeh is made of roasted green wheat and is rich in protein, vitamin and mineral. It is often used for cooking traditional soup (cracked wheat soup).
[7] Couscous is made of semolina wheat and is tradionally served with grilled meat or vegetable stew in Magreb countries.

(3)-2 Analysis of Growth Potential

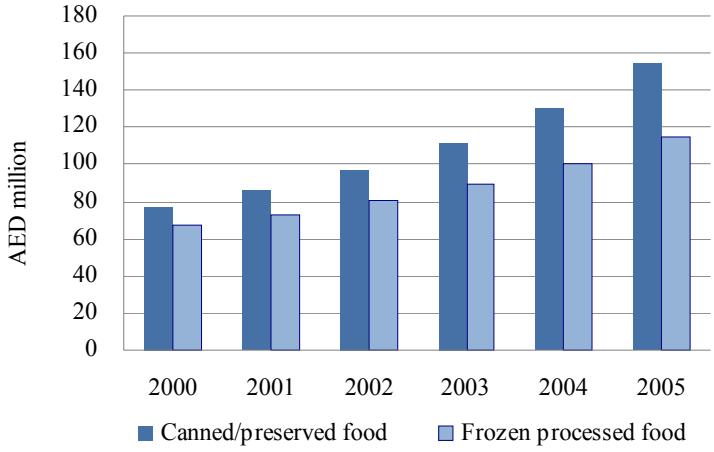
Global processed food market has been expanding by the change of life-style and the preferences for convenient foods. In the Gulf countries, Saudi Arabia and UAE are the two biggest markets for food processing industry. In Saudi Arabia, more than half of the population is under 20 years old with annual population growth rate of 3.5%, which creates the new purchasing patterns and preferences for canned, packaged and frozen food. The demand for processed food is expected to grow by 4.5% annually[8].



Source: Euromonitor International, Consumer Middle East 2007

Figure 2.2.5 Processed Food Market in Saudi Arabia, 2000-2005

In UAE, the expansion of tourist sector and the establishment of hotels and resorts lead to the increase in consumption of processed food. However, it should be noted that open trade policies in both countries makes processed food market very competitive. In particular, confectionaries, beverages and dairy products are very competitive among cheaper products from Turkey, Egypt, Syria and Lebanon.



Source: Euromonitor International, Consumer Middle East 2007

Figure 2.2.6 Processed Food Market in UAE, 2000-2005

[8] *Export Opportunities: Processed Food and Beverages*, Trade Mart June-July 2006

In addition, the growth of *Halal* food market in the region is striking. Processed meat (mortadella[9]) made in Palestine has become very popular in the region as a reliable *Halal* product. In Jordan, well-known brand of mortadella contributes to the current market share (20%, by PFIA estimate) and the growth of export. In fact, the value of global *Halal* food market is reaching nearly US$500 billion in the world[10] and its market is still expanding.

Traditional products such as za'tar, sumak, freekeh and couscous are produced according to Palestinian traditional recipes and methods. Traditionally, families made such products with herbs and spices at home, but nowadays, the convenience to cook such processed products has been attracting consumers, particularly those living in the cities and abroad. There are a number of Palestinian diasporas and Arab communities in the world consuming such traditional foods. As a result, the export of traditional herb products has been growing by 10% to 15% annually according to PFIA. The growing consciousness about healthy food and increasing demand for organic food would serve as a tail wind for such traditional food products and olive oil as well.

However, it does not mean that there is no competition for such Palestinian products. There are competitions from Jordanian products in the processed meat market, and products from Syria and Lebanon are cheaper and competitive in the traditional food product market. In addition, the lack of marketing activities and marketing channel make most Palestinian companies difficult to enter potential new market and develop and design products according to market needs and consumer preferences.

(4) Potential Products

(a) Processed Meat (Mortadella)

Processed meat, mortadella is one of the promising exporting products in Palestine. Neighboring Jordan is a big market for mortadella, which imports JD2.3 million (equivalent to US$3.2 million, JD1 = US$1.4) in 2004.

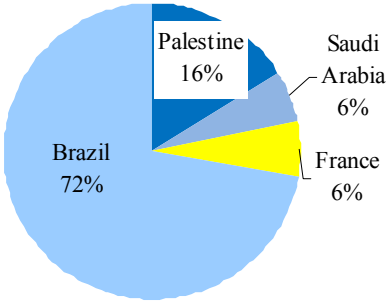
Table 2.2.1 Import of Mortadella in Jordan, 2001-2004 (JD thousand, thousand kg)

	2001		2002		2003		2004	
	Value	Volume	Value	Volume	Value	Volume	Value	Volume
Beef	1,622.9	1,217.0	1,655.6	1,205.7	1,622.5	1,260.0	1,467.4	1,048.0
Chicken	389.8	304.7	676.2	735.8	424.1	347.4	540.8	309.8
Turkey	660.1	568.7	116.9	85.0	700.2	641.1	278.3	122.8

Source: PalTrade, Amman Office

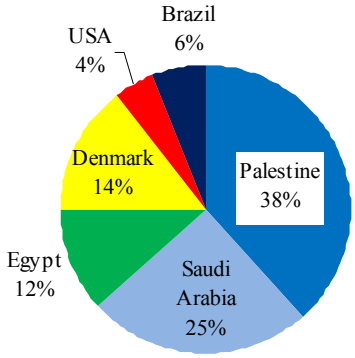
Among three types of mortadella, namely beef, chicken and turkey, beef mortadella is the highest consumed product in Jordan. Despite its big market, the share of export from Palestine is only 16% and Brazil is the main exporter. On the other hand, for chicken and turkey mortadella, Palestinian exports represent 38% and 26% respectively.

[9] Mortadella is cold cut meat and a kind of sausage, originating from Bologna, Italy. It is made from beef, chicken or turkey in Palestine and is consumed at breakfast or as ingredients of sandwiches.
[10] *Industry Trend Analysis: The Halal Food Industry in the Middle East*, Business Monitor International, 2007

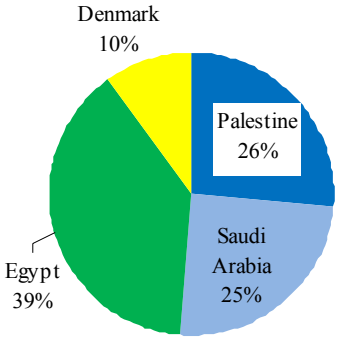


Source: PalTrade

Figure 2.2.7 Major Exporting Countries of Beef Mortadella in Jordan, 2004



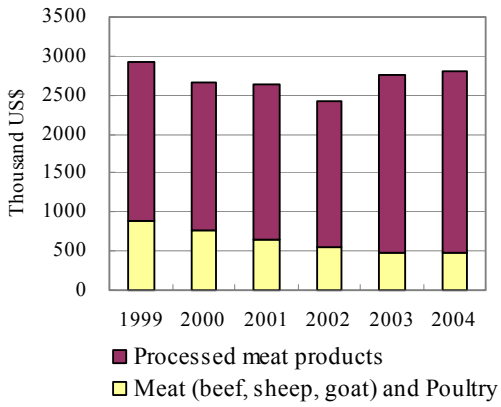
Source: PalTrade



Source: PalTrade

Figure 2.2.8 Major Exporting Countries of Chicken (left) and Turkey (right) Mortadella in Jordan, 2004

Regarding the Palestinian export of the processed meat products, there has not been a significant change in total value of export of meat and processed meat products altogether (SITC-3 code 016, 017). However, while the export of meat (which include meat of bovine animals, sheep, goat and poultry and more than 90% of them are exported to Israel) is declining, the export of processed meat products such as sausage and mortadella (a kind of cold meat) are gradually increasing in recent years. The export value of the processed meat products in 2005 was approximately US$ 2.3 million.

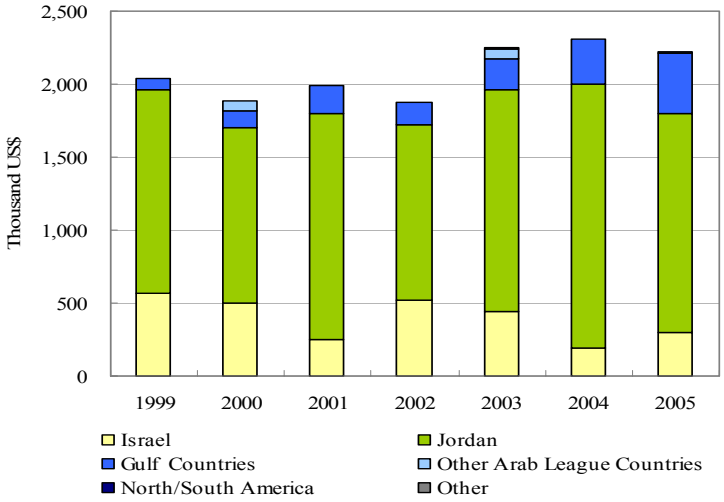


Source: PCBS

Figure 2.2.9 Palestinian Export of Meat and Processed Meat Products, 1999-2004

As already mentioned, for the Palestinian processed meat products the most important destination country is Jordan. It is followed by Israel and the Gulf countries such as UAE, Saudi Arabia and Kuwait. While the share of Israel is decreasing in recent years, the share and the value of export to the Gulf countries are rapidly increasing. With regards to the export to Muslim countries, Palestinian products have advantages of producing *Halal* products.

According to PFIA, there are at least six companies exporting processed meat products. Palestinian producers have joint-venture or use local agent to connect the distribution channels in the target country. The export to Jordan was started in 1990s and the Palestinian brands have already established good reputation in quality. Those Palestinian companies are aiming to expand the export market by increasing sales in the present foreign markets and also by entering new markets, namely the Gulf countries and North African countries. Some efforts to meet specific market needs are observed, such as introducing a new form (square-shape canned product as preferred in the Gulf Countries) of products. However, marketing function is still insufficient at each company's level and the lack of market information remains one of the main obstacles for export promotion.



Source: PCBS

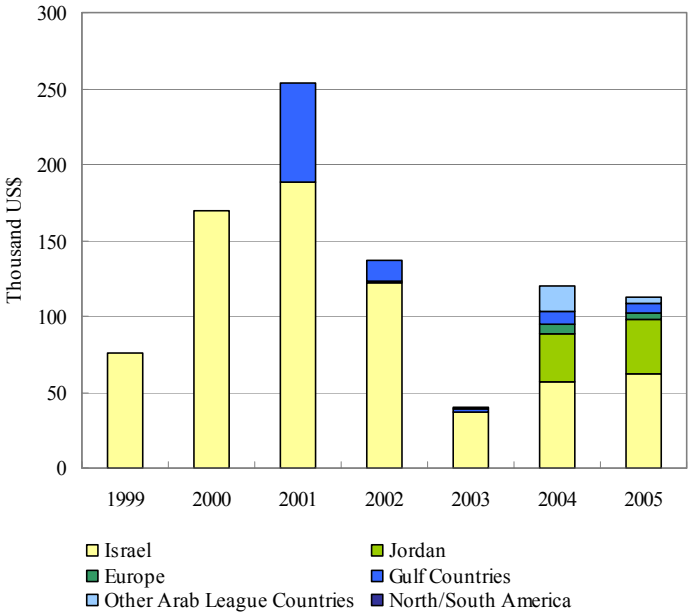
Figure 2.2.10 Palestinian Export of Meat Product by Destination Country/Area, 1999-2005

Table 2.2.2 SWOT Analysis of Processed Meat

Strength	Weakness
-Quality & security assurances, e.g. ISO22000 and HACCP -Good reputation as a reliable Halal food -Price competitiveness against European products -Variety of products (beef, chicken, turkey) -Availability of good technology to process turkey	-Relatively higher wages in the region -High cost of raw/packaging materials -Limited turkey slaughter facilities -Limited production capacity (60%) -High cost and time-consuming transportation -Lack of marketing activity & channel
Opportunity	**Threat**
-Well-known brand in Jordan (20% share) -High demand in the Gulf market -Potential market in North Africa, e.g. Algeria -Expanding Halal food market in the region -Tax free trade with external market	-Unstable & insufficient supply of raw materials -Incapability of importing poultry and frozen meat -Competition from Israel, Jordan, Lebanon and Egypt -Sudden closures and restrictions on movement

(b) Traditional Food (za'tar, couscous, freekeh, sumac)

Palestinians use many kinds of herbs in their traditional cuisine, and there are also some spices that are exported. Thyme is one of the examples, and it is used as a major ingredient of a mixed spice called za'tar. Thyme has been exported to Israel and some European countries, and in recent years export to the Middle Eastern countries such as Jordan and the Gulf countries where za'tar is also preferred, is taking larger share in the total export.



Source: PCBS

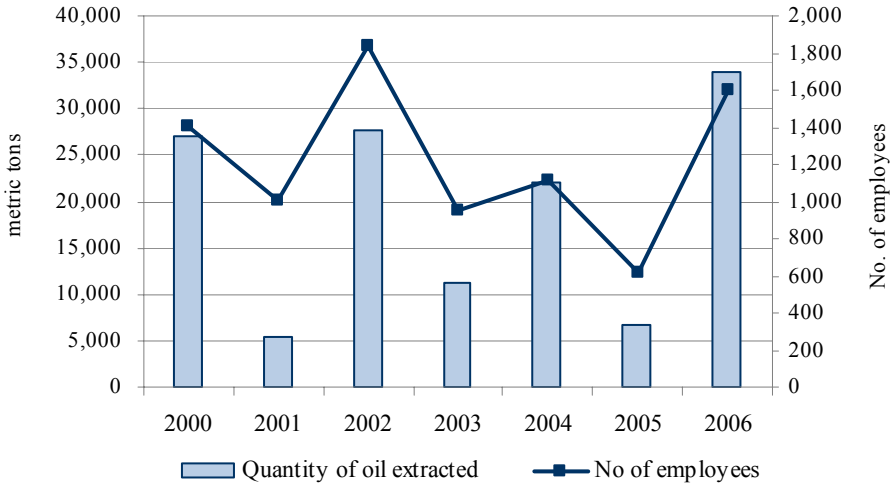
Figure 2.2.11 Palestinian Export of Thyme by Destination Country/Area, 1999-2005

Table 2.2.3 SWOT Analysis of Traditional Food

Strength	Weakness
-Availability of local raw materials (herbs, spices) -Utilization of local labor forces, esp. women -High quality and good reputation in the region -Internationally recognized quality (couscous)	-Relatively higher wages in the region -Limited production and export capacity based on traditional production methods -Small market size and limited export quantities -High cost of transportation -Lack of marketing activity & channel
Opportunity	**Threat**
-Growing export within the region by 10-15% -Successful market access to Europe, e.g. Italy, Belgium, Holland -Increasing preference for organic and healthy food -Consumption by Palestinian diasporas and Arab communities abroad	-Competition from Syria, Lebanon and Egypt -Sudden closures and restrictions on movement

(c) Olive Oil

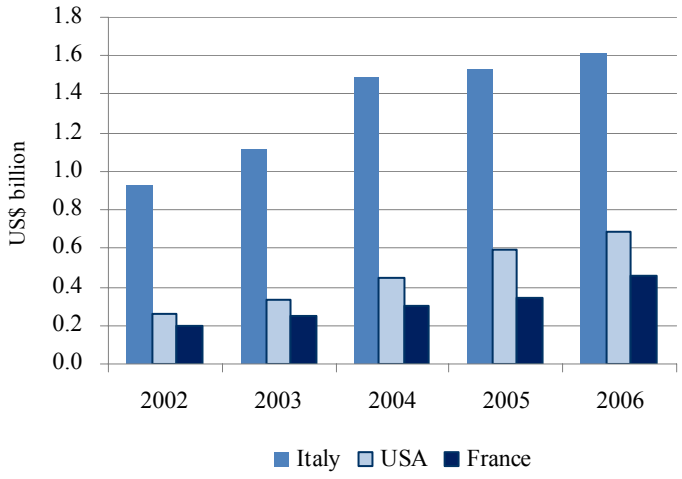
Olive oil is a major potential product in Palestine. According to PalTrade, the average production is higher in the 2000s compared to the 1990s. As shown below, the production reached at the highest in 2006. The volume of olive oil production is subject to fluctuations because the production of olives differs based on two-year cycle, which means high production year is followed by the low level of production.



Source: PCBS

Figure 2.2.12 Quantity of Extracted Olive Oil, 2000-2006

The export market of virgin olive oil continues to expand, particularly in Europe and USA. Olive oil produced in Palestine is to a large extent virgin olive oil with acidity of no greater than 3.3%. Italy, the biggest consumer of olive oil, imports virgin olive oil of US$1 billion each year. The consumption of virgin olive oil in USA is growing, too and imported US$0.6 billion in 2006.



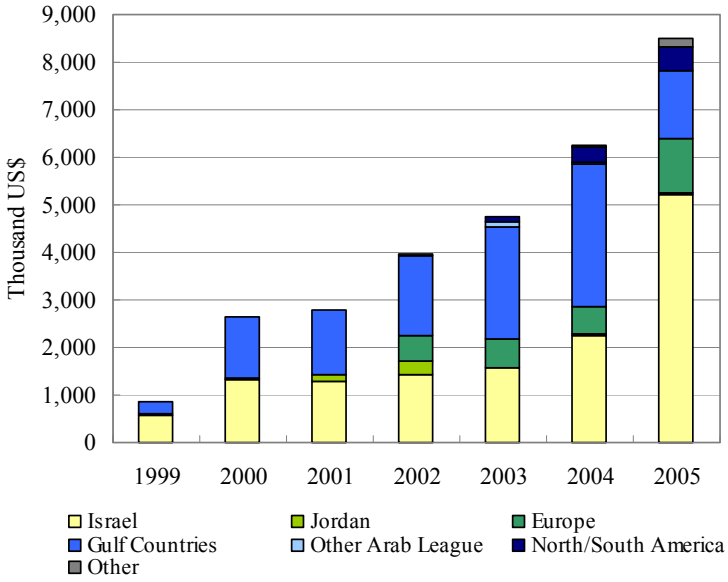
Source: UN Comtrade

Figure 2.2.13 Import of Virgin Olive Oil in Selected Countries, 2002-2006

Olive oil is one of the rare products of which the export is growing in spite of Palestinian economic decline after the Intifada. In 2005 the value of olive oil export accounted for US$8.5 million[11].

In 1999, more than 60% of the total export is destined to Israel, however, the destination countries are increasing and the total value of export is also growing since then. Especially, the export to the Gulf countries, Europe and North America is growing rapidly. Export to Jordan is not allowed due to the Jordanian policy of protecting their own olive oil industry, with exception of 'personal gift' from Palestinian residents to Jordanian residents, which are partly consumed personally and other part sold commercially.

The growth of export to Europe and North American market is partly due to expanding fair trade market. Efforts to expand the market have been made by Palestinian side as well, by participating trade fairs and exhibitions led by organizations such as PalTrade and PFIA. It has so far made some results and opened the door to new markets. Although the amount of export to each country is still limited, the number of destination countries is increasing.



Source: PCBS

Figure 2.2.14 Palestinian Export of Olive Oil by Destination Country/Area, 1999-2005

[11] According to PalTrade, export value of olive oil may differ depending on the source. This is due to the abundance of informal distribution channels, such as 'gift' to family members in Jordan and the Gulf countries, and informal selling channels to Israel undocumented and un-quantified. PalTrade estimates actual olive oil export of 2004/2005 season may be 12,000 to 14,000 tons.(*The Palestinian Olive Oil Sector Trade Development Strategy*, PalTrade, 2005)

Table 2.2.4 SWOT Analysis of Olive Oil

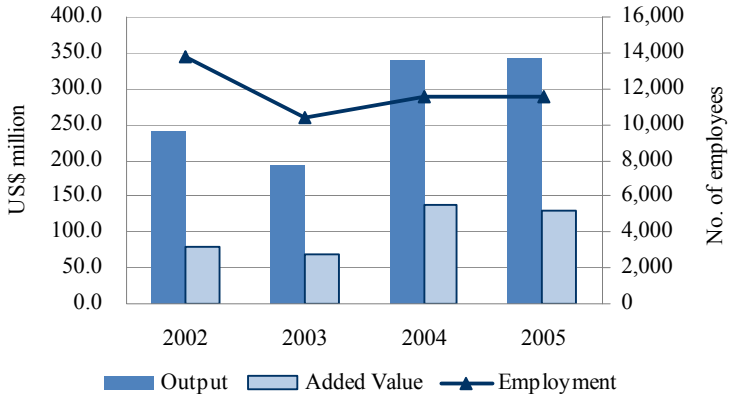
Strength	Weakness
-Availability of raw materials (olives) under preferable climatic conditions -Abundance of land suitable for olive planting -Almost entire olive oil as virgin olive oil (acidity no greater than 3.3%) and limited production of extra virgin oil (acidity less than 0.08%) -Brand of olive oil from "Holy Land" -Use of organic fertilizers and general organic nature of farming practices in Palestine -Price competitiveness against European products	-Relatively higher wages in the region -Costly production inputs through Israel, e.g. fertilizers and pesticides (20% higher than average) -Low productivity and high production cost based on manual means -Limited laboratories and quality testing facilities and lack of organic certification body in Palestine -Lack of bottling and labeling facilities without sufficient information for consumers -Lack of adequate storage to protect olive oil from sunlight and temperature variations -Lack of marketing activity & channel
Opportunity	**Threat**
-Growing health consciousness and demand for virgin and extra virgin olive oil worldwide -High demand from Arab countries based on tax free trade, esp. from Saudi Arabia -Increasing demand for high quality olive oil regardless of the higher price in Europe -Potential market for organic olive oil in future	-Competition from Jordan, Syria and Tunisia -Sudden closures and restrictions on movement -Inability to enter Jordanian market, and as a result, difficult to enter the Gulf market through Jordan

2.2.2 Stone and Marble

(1) Overview

Stone and marble industry is a competitive and profitable industry in Palestine. Both the output and added value of non-metallic industry increased dramatically in 2004 up to nearly US$350 million and US$150 million respectively and remained high in 2005. The output produced in this sector is around one quarter of the total output in manufacturing sector. According to USAID, the production and trade of stone and marble industry has been growing since 1990s and the average annual growth of production reaches 7.3% and that of trade is 8.7% for the last decade[12]. Non-metallic industry has been the biggest industry in terms of job creation. Though it has not recovered to the level of 2002 (13,746 jobs), the industry created more than 12,000 jobs in 2005, which is 21% of the total employment.

[12] *Cluster Competitiveness Assessment*, USAID, 2007



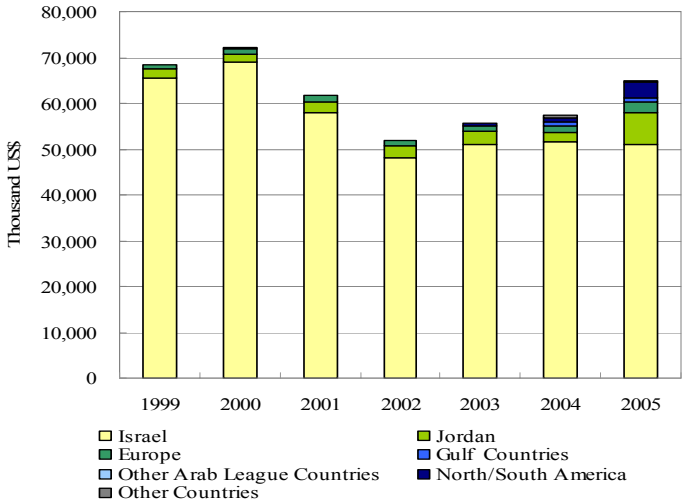
Source: PCBS

Figure 2.2.15 Output, Added Value and Employment, 2002-2005

(2) Export Performance

Palestine exported the total value of US$ 64million of stone and marble in 2005[13]. The output of non-metallic products in the same year was US$341 million. Approximately 19% of the products are estimated to be exported.

Stone and marble is one of few Palestinian export products that the raw material is locally available. Main exporting products consist of slabs (stone panels sawn from excavated blocks), building stone, decorative products (such as counters, window ledges, stairs, pillars etc.), tiles and non-processed blocks. There are several stages of processing and each process requires skilled labor. Some of the Palestinian companies export products of lower level of processing to their Jordanian counterpart and undertake the rest of the processes there, in order to take advantage of the proximity to the market (Jordan and the Gulf Countries) and also lower labor cost.



Source: PCBS

Figure 2.2.16 Palestinian Export of Stone and Marble by Destination Country/Area, 1999-2005

[13] The data is obtained from PCBS and this figure does not include other non-metallic products such as sand and cement. It has to be noted that export figure (and output) of stone and marble sector vary according to the data source. PalTrade consider that it is due to the activities of informal sector, underreporting of sales and export documented as of Israeli rather than Palestinian origin. (*Palestinian Stone and Marble Sector: Trade Development Strategy*, PalTrade, 2005)

In terms of export destination country, Israel is the largest buyer of Palestinian stone and marble, and until 2004 Israel consumed more than90 % of total Palestinian export. However, while the value of export to Israel is not drastically changing since 2002, export to Jordan, North America, Europe and Gulf Countries are growing and thus the share of Israel in the total export is declining. The diversification of the destination countries is also significant. Total number of countries has grown from 12 in 1999 to 24 in 2005.

According to *the Union of Stone and Marble Industries* (USM), out of more than 400 of their member companies, approximately 20 companies are exporting their products. Among them, there are a few large companies that export significant part of Palestinian stone and marble, and smaller companies are struggling in lack of market information and knowledge of export procedure.

(3)-1 Analysis of Competitiveness

(a) Price Competitiveness

First of all, the availability of natural stones is the source of competitiveness for stone and marble industry in Palestine. In addition, the brand of "Holy Land" creates additional value for their products. Many companies procure packaging materials from the local market, mainly in Hebron, which helps reducing the production cost. On the other hand, higher wages of skilled labors and energy cost in Palestine hinders the enhancement of price competitiveness. Machineries for cutting and processing, which are mostly imported from abroad, mainly from Italy are expensive. In addition, the cost for machinery maintenance and spare parts are extremely high, which is generally US$20,000 to US$30,000[14]. As a result, raw and intermediate materials represent around 70% of the total cost in stone and marble industry in Palestine.

A major constraint is high transportation cost caused by the size of products and the distance from quarries in the West Bank to the market. Price range of stone and marble produced in Palestine is in the middle between high-priced products from Spain and Italy and lower-priced products from China and India. According to a stone and marble company operating in Jordan, Palestinian products are more expensive than Jordanian products, but the price difference is not big and they remain competitive in price in Jordanian market.

(b) Quality Competitiveness

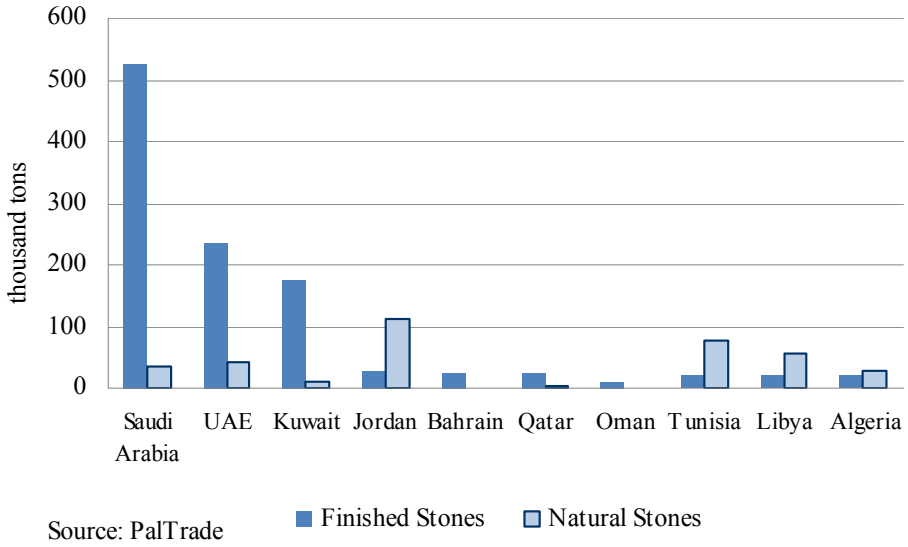
Stone and marble produced in Palestine are highly competitive in quality. First of all, highly skilled labor forces with good experiences are available, particularly in Hebron and Bethlehem, and to some extent in Ramallah. Compared to Jordan where skilled labor forces with sufficient experiences are scarce, Palestinian products gain quality competitiveness in the region. Secondly, they are naturally strong enough to be used as outside building materials and are

[14] Based on interviews with stone and marble companies in Palestine

characterized by the low water absorption, little change in color, and resistance to temperature change, chemical phenomena and fire, according to PFI's analysis. Variety of colors is another valuable characteristic of Palestinian products. However, since only a few companies obtained ISO certificate (ISO9000), efforts should be taken to promote quality control and obtain international standard to prove their quality competitiveness for the export promotion.

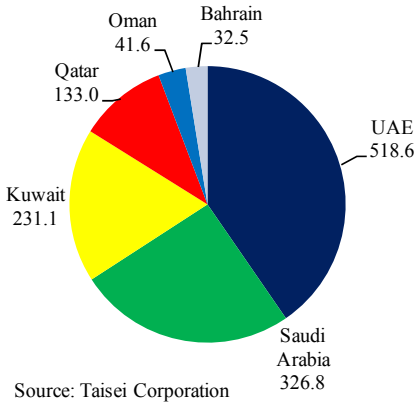
(3)-2 Analysis of Growth Potential

Global stone and marble market has been expanding because of world-wide construction boom. Traditionally high demand for Palestinian stone and marble came from Jordanian market where skilled labor forces were not available and it remains the major export market. According to USM, 70% of the current export is finished stones and 30% is natural stones, but the latter is on the rise especially in Jordan, because of cheaper labor forces and the lower tariff rate. For the development of the industry, the export of finished stones and what is more, exporting higher added value products should be promoted. In addition to blocks (natural stones), a wide range of products exist in this sector, from building stones (most products are categorized into this) and slabs as low added value products to custom cut tiles, headstones (gravestone) and decorative and ornamental products as high added value products. On the other hand, as indicated below, the Gulf countries import more finished stones than natural stones. Therefore, a great demand for finished stones exists in the region. The demand for stones related to construction projects is enormous in the Gulf countries, particularly in Saudi Arabia, UAE and Kuwait where US$1 billion construction projects have been implemented in 2007.



Source: PalTrade

Figure 2.2.17 Import of Stones, 2003



Source: Taisei Corporation

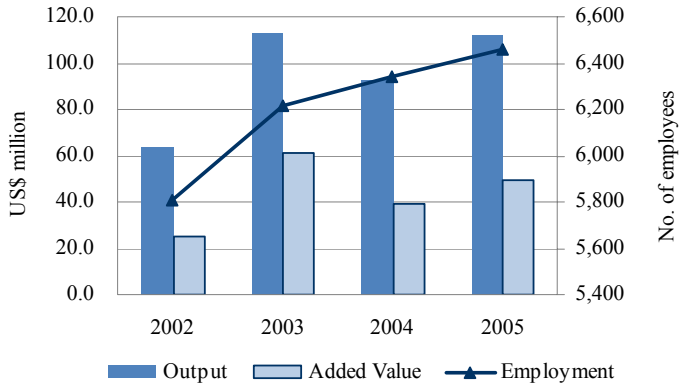
Figure 2.2.18 Construction Projects in the Gulf Countries, 2007 (US$ million)

Despite the growing demand in stone and marbles, it is difficult for many Palestinian companies to export their products. One reason is the size of companies, which is too small to have export capacity and marketing functions. Since the competition is very fierce in the local market, in addition to the declining price in Israeli market, the production capacity declines and remains low (50%, by USM estimate). To meet the growing demand in the region and compete with cheaper but low quality products from abroad such as Turkey and China, it is necessary for many companies to develop the export capacity and to strengthen marketing channels for the export promotion.

2.2.3 Furniture

(1) Overview

Furniture industry is traditionally developed in the Gaza Strip, but nowadays there are many companies operating in the West Bank as well. The output of furniture industry has been recovering up to above US$100 million from the plummet in 2002, which is 8% of the total output in manufacturing sector in 2005. Similarly, the added value has been increasing in a preferable manner. Compared to the level of added value in 2002, it has been nearly doubled in 2005. Furthermore, it should be noted that the added value to output (44%, 2005) is higher than the average of manufacturing sector (38.2%, 2005). The employment effect by furniture industry has become prominent these days. From 5,800 jobs in 2002, the industry created nearly 6,500 jobs in 2005 and its share increased to 12% of the total employment.



Source: PCBS

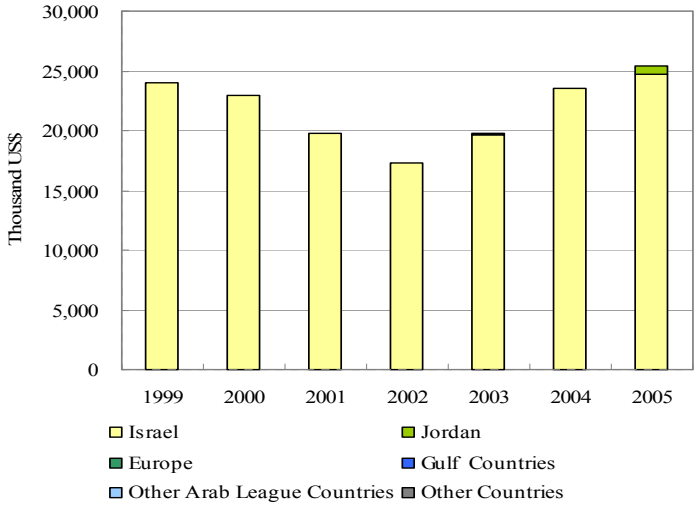
Figure 2.2.19 Output, Added Value and Employment, 2002-2005

(2) Export Performance

While the large part of furniture production is sold within Palestine, the industry is also exporting products such as wooden furniture and mattresses. Palestine exported total of US$25 million of furniture in 2005. This represents approximately 23% of total output of the industry, which was US$112.3 million in the same year. More than 90% of the export is to Israel (and to some extent the products are presumed to be re-exported from Israel to other countries). Over the last couple of years, the export to Jordan has been expanding little by little. Most of the products exported to other markets than Israel are from the West Bank, whereas the products of manufacturers in the Gaza Strip are sold locally or exported to Israel.

In Jordanian market, the quality of the Palestinian products is regarded comparatively high and rather competitive in terms of price. However, due to limited channels of distribution and lack of marketing, the Palestinian products are not well known in the market under the fierce competition with other foreign products, notably those from China.

Due to the product size and its variety of forms, export by land transport is costly and also susceptible to the negative impact of movement restriction. For distributors outside Palestine, delayed delivery due to closure of border is a serious problem, and the damage to the products in the back-to-back process is causing additional cost of transport.



Source: PCBS

Figure 2.2.20 Palestinian Export of Furniture by Destination Country/Area, 1999-2005

(3)-1 Analysis of Competitiveness

(a) Price Competitiveness

Furniture industry faces difficulty in enhancing price competitiveness because of the high cost of transportation and dependency on imported raw materials. Raw materials are usually imported through Israeli importers, which make the procurement costly. In addition, there is

no usable port for Palestinian companies, which makes the transportation costly and unpredictable. Under the current situations, the transportation of goods within and between the West Bank and the Gaza Strip is extremely difficult, which leads to the frequent delivery delay and as a result, the increase in transaction cost. Furthermore, according to PalTrade, 85% of the furniture manufacturers in the Gaza Strip use manual or semi-automated machinery and only 15% uses automated machinery[15]. In the face of the inflow of cheaper products from China and abroad, manufacturers have to keep the price as low as possible with limited profitability. It is difficult for them to invest in machineries under such circumstances, which in the end prevents the improvement of productivity in the industry.

(b) Quality Competitiveness

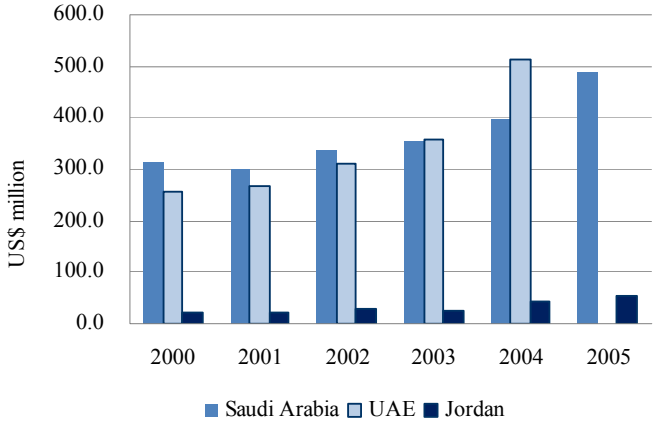
Furniture industry is largely concentrated in the Gaza Strip where around 80% of the furniture production is made and highly skilled workers with craftsmanship are available. Since many local furniture factories are categorized as middle or small-sized, they focus on manufacturing unique and high quality products for niche market rather than mass production. Traditionally, availability of skilled workforce with good craftsmanship has been strength of Palestinian furniture industry. The quality was highly esteemed and products were not only exported to Israel but also exported to other countries through Israel. Since the quality and product design has been regarded as major determinants for the purchase of furniture, Palestinian furniture industry has an advantage in this regard. However, considering medium or small size of companies and fierce competition from cheaper products from abroad, it is difficult to allocate enough resources for further quality improvement. In addition, furniture industry should promote certification of internationally recognized standard in addition to PSI quality mark which is effective only in Arab countries.

(3)-2 Analysis of Growth Potential

The biggest market for Palestinian furniture industry lies in Israel which covers more than 90% of the total export sales. However, the sales to Israel have been declining because of the delivery delay caused by movement restrictions, frequent closures and the inflow of cheaper products from Asian countries. On the other hand, the growth potential exists in the Arab League countries since the Arab League decided to grant Palestinian products tariff free access to their market. In accordance with growing population and the increase in per capita income level, the furniture market has been expanding in the Gulf countries. For instance, the furniture consumption has been increased by 3.8% in UAE from 1996 to 2002 reaching US$376 million in 2002[16]. As shown below, UAE's import of furniture dramatically increased by reaching US$500 million in 2004 and became the biggest market in the region. While imported furniture represents 80% of the market in UAE, in addition to Italy as the biggest exporter, Asian countries such as Malaysia, Indonesia and China and Middle East countries

[15] *The Palestinian Furniture Sector: Trade Development Strategy*, PalTrade, 2005
[16] ditto

such as Turkey and Oman increased their sales to UAE market. According to PalTrade, promotional efforts have been considered as a major factor for the increase in sales from such countries. In this regard, the lack of marketing activity and marketing channel for Palestinian furniture industry is their major weakness for entering the potential market. In Saudi Arabia, 70% of the total consumption is covered by imported furniture and South East Asian countries grew their exports with price competitiveness.



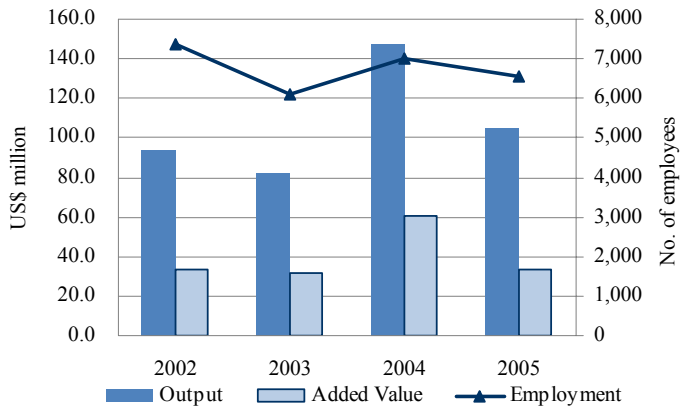
Source: UN Comtrade
Note: Data on UAE, 2005 is not available

Figure 2.2.21 Import of Furniture, 2000-2005

2.2.4 Metal Products

(1) Overview

Metal industry is the fifth largest industry in terms of the output amount which produces 8% of the total output in 2005. Its output reached at the highest above US$140 million with added value of around US$60 million in 2004, but both the output and added value declined in 2005 by 30% and 45% respectively. Metal industry provides relatively large employment opportunities, which represents 12% of the total employment in manufacturing sector and accounting for more than 6,000 jobs in 2005.

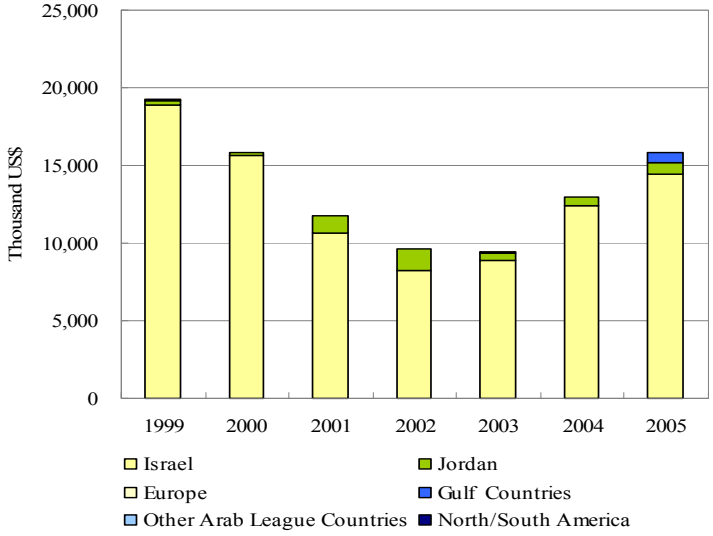


Source: PCBS

Figure 2.2.22 Output, Added Value and Employment, 2002-2005

(2) Export Performance

There are a wide range of metal products such as wire, nails, tubes, pipes, screw, bolts and office/ household articles exported from Palestine. The total value of export accounted for US$15 million in 2005, which is approximately 15% of the total output of the industry in the same year. Most of the products have been exported to Israel. In 2005 91.2% of the total export value was destined to Israel, followed by the Gulf countries (4.4%), and Jordan (4.3%).



Source: PCBS

Figure 2.2.23 Palestinian Export of Metal Products by Destination Country/Area, 1999-2005

(3)-1 Analysis of Competitiveness

(a) Price Competitiveness

Metal industry is suffering from higher price of raw steel materials, caused by the growing demand from manufacturing and construction sectors in China and India. The Gulf countries, steel consumption has also grown by 31.1% from 34.7 million tons in 2005 to 45.5 million tons in 2006. It is expected to reach 73.3 million tons by 2010. The demand for basic iron and steel products is expected to increase from 15 million tons in 2005 to around 19.7 million tons in 2008 in the Gulf countries[17]. All these factors led to soaring price of steel. Under such circumstances, metal industry which has no domestic steel suppliers finds it very difficult to compete with cheaper products from China. Other than the price of raw materials, higher wages and transportation cost weakens the price competitiveness of Palestinian products. According to our survey based on interviews with metal product companies, the price of Palestinian products is 30% to 50% higher than products from China, 25% to 40% higher than those from India, 15% to 20% higher than those from Egypt, and 10% to 15% higher than those from Turkey in Jordanian market. The price is nearly the same or a little lower than those from Europe and USA.

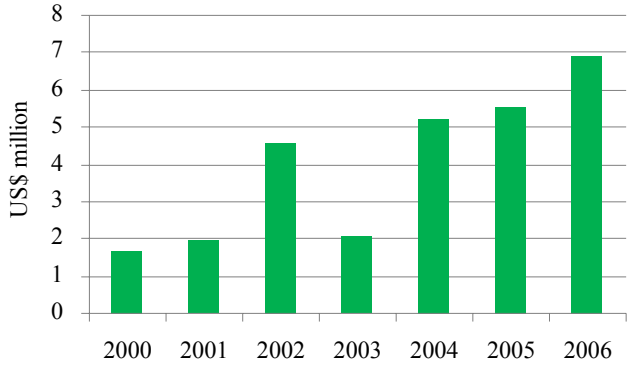
[17] *Iron and steel: Trade and industry in GCC member states*, http://www.ameinfo.com/114643.html

(b) Quality Competitiveness

In general terms, metal industry in Palestine strengthened its quality competitiveness to compensate for the lack of price competitiveness and invested in product design and product development. Availability of skilled engineers and labor forces is an asset for producing high quality products. One of the strengths of metal industry is the proximity to Israeli market and the transfer of technology and good experiences from Israel. Traditionally, Israel as the biggest market as well as the closest business partner required Palestinian companies to produce exportable products with high quality. As a result, Palestinian metal industry has been strengthening the quality of products to meet the demand from outside. On the other hand, there are only a few domestic companies certified by PSI and most companies have no internationally recognized quality certificate such as ISO and CE mark for some machineries, which prevents them from entering new external markets.

(3)-2 Analysis of Growth Potential

Manufacturing metal products are related to various industrial activities, namely metal furniture, construction, spare parts, machines and equipments, automobile parts and others. In Jordan, import of metal furniture has increased dramatically in 2006, as shown below. There is a competition between Jordanian and Palestinian products in Jordanian market. The higher quality at the more or less similar price allows Palestinian products to remain competitive. However, it should be noted that consumers in Jordanian market increasingly care about the price rather than quality[18]. On the other hand, it is rather difficult for Palestinian products to compete with much cheaper products from China even if their products have poor quality.



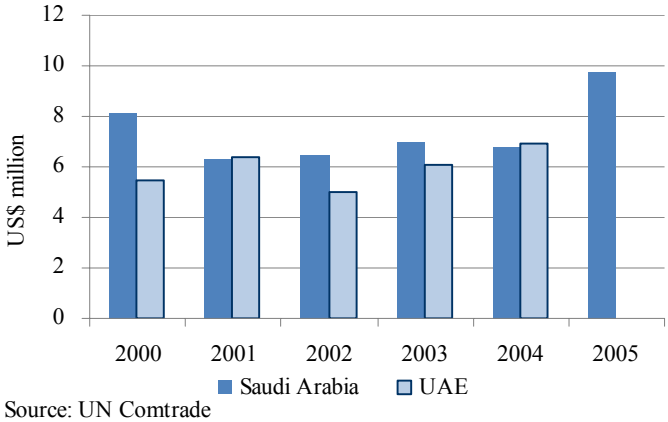
Source: UN Comtrade

Figure 2.2.24 Import of Metal Furniture in Jordan, 2000-2006

In the Gulf countries, growing demand exists for metal products from construction sector, infrastructure projects and residential and commercial projects in the region. According to Easa Saleh Al Gurg Group, one of the leading business houses in Dubai, the market of office furniture such as metal furniture in UAE is expected to reach between AED700 million (equivalent to US$108 million, AED1 = US$0.27) and AED1 billion (equivalent to US$0.27

[18] Based on interviews with Palestinian companies and trade agencies in Jordan.

billion), in accordance with the expansion of residential and commercial property market[19]. As shown below, high demand comes from Saudi Arabia and UAE and their import of metal office supplies has increased since 2002. According to metal product companies, Palestinian products are competitive against products from Europe in UAE market, whereas there is increasing price competition from China, India and Turkey. The lack of ISO certificate would become weakness to compete in external market.



Source: UN Comtrade
Note: Data on UAE, 2005 is not available

Figure 2.2.25 Import of Metal Office Supplies, 2000-2005

2.2.5 Pharmaceutical

(1) Overview

The nature of pharmaceutical industry is capital intensive, so the employment effect is limited compared to other manufacturing sectors. Only six companies (five in the West Bank and one in the Gaza Strip) constitute the industry and all of them manufacture generic drugs. The production has been increasing stably and the export grew significantly from US$2.3 million in 2004 to US$3.4 million[20] in 2005 by 48% increase[21]. However, as shown below, the pharmaceutical industry is smaller in the output and export, and lower in labor productivity in comparison with Jordan and Egypt.

The pharmaceutical products registered in Palestine have increased significantly. While 1,033 products in the West Bank and 37 products in the Gaza Strip had been registered with *the Ministry of Health* until the end of 2005, 65 products in the West Bank and 6 products in the Gaza Strip were registered during 2005[22]. Most of medicines produced in Palestine are generics such as anti-infective (35%), anti-allergic (15%), analgesic (7%), non-steroidal anti-inflammatory drug (7%), vitamins and nutritious (4%), hormones (3%) and others. The major dosage forms are tablets and caplets (32%), solution such as syrup, elixir and drops (14%), capsules (11%), suspension (10%), suppositories (6%).

[19] *UAE office furniture market worth AED 1 billion*, http://www.ameinfo.com/87512.html
[20] The data excludes pharmaceutical exports to Israel.
[21] *Cluster Competitiveness Assessment*, USAID, 2007
[22] Union of Palestinian Pharmaceutical Manufacturers

Table 2.2.5 Pharmaceutical Industry in Palestine

	2005	Jordan	Egypt
Number of Companies	6	18	61
Number of Employees	859	3,098	28,658
Output (US$ million)	38.0	385.0	1,600.0
Output/Worker (US$)	44,000	124,274	55,831
Export (US$ million)	3.4	270.0	44.0

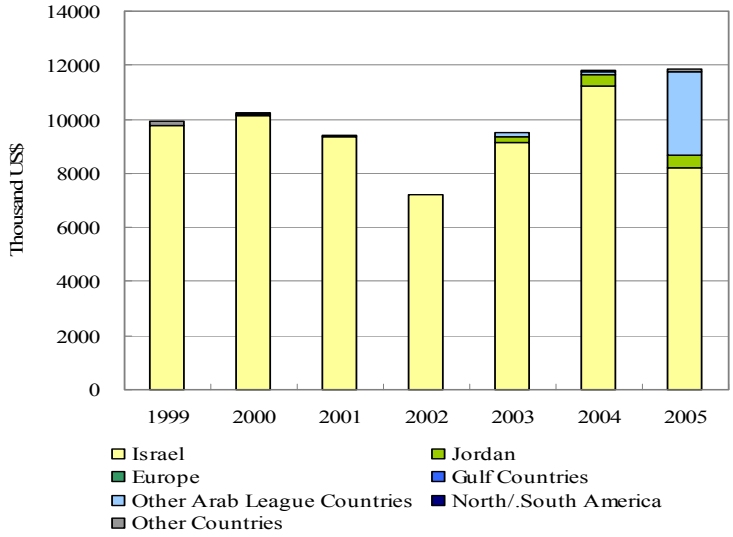
Source: USAID

(2) Export Performance

According to PCBS, approximately US$12 million of pharmaceutical products were exported in 2005[23]. With regards to the export, significant growth is achieved over the last couple of years. Export destination counties include Israel, Jordan, Yemen, Iraq and former Soviet Union countries, and more recently, North African countries such as Algeria and Cote d'Ivoire. Although the number of export destination countries are not significantly increasing the sales in each countries are successfully growing. As the registration of pharmaceutical products in each country are usually costly and time consuming process, exporting companies tend to expand the sales in existing country rather than seeking for new markets one after another. According to *the Union of Palestinian Pharmaceutical Manufacturers*, out of six Palestinian pharmaceutical companies, four companies are exporting their products. Some of them have established joint ventures in the target country in order to facilitate the distribution and marketing. In Palestinian industry where the lack of marketing capacity and effort is often regarded as one of the major obstacles for export promotion, pharmaceutical industry can be considered an exception. Palestinian products are still new and not well-known in foreign pharmaceutical market where the trust that the brand bears largely influence the sales. Thus, continuous effort in marketing and promotion as well as keeping high quality standard is regarded highly important for the industry.

In order to minimize the negative impact from the movement restriction and border procedure, efforts are made by both Palestinian producers and the distributors in foreign market. Palestinian producers keep rather large amount of stock of raw material which are imported from all over the world. At the side of distributors outside Palestine, they keep some 'buffer stock' to correspond the risk of delayed delivery.

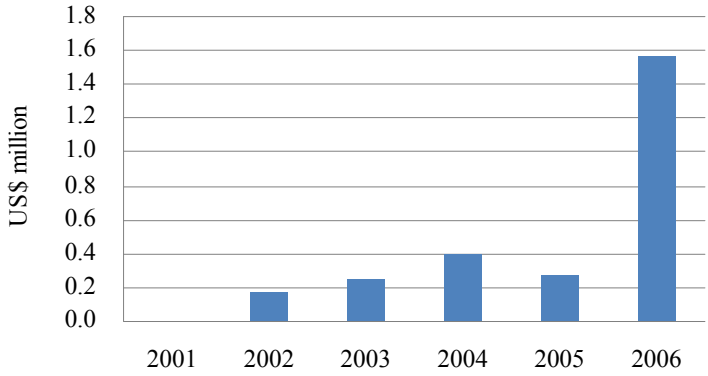
[23] The data is classified according to ISTC-3 code, and the data here includes ISTC code 542: medicament (including veterinary medicaments). Palestinian drugs are not allowed into Israeli market, however, the data shows great amount of medicines exported to Israel.



Source: PCBS

Figure 2.2.26 Palestinian Export of Pharmaceutical Products by Destination Country/Area, 1999-2005

In accordance with the growth of export in Palestinian pharmaceutical industry, the export to Jordan grew dramatically from US$0.26 million in 2005 to US$1.5 million in 2006[24]. This is partly because of the high demand for pharmaceutical products from Iraq in Jordanian market.



Source: Global Trade Atlas

Figure 2.2.27 Palestinian Export of Pharmaceutical Products to Jordan, 2001-2006

[24] According to Global Trade Atlas by Global Trade Information Services, Inc.

(3)-1 Analysis of Competitiveness

(a) Price Competitiveness

Palestinian pharmaceutical industry is characterized by higher efficiency in production within Palestinian manufacturing sectors, though it is far below the level of international pharmaceutical industries. Output per worker is US$44,000 in 2005, which is much higher than the average of the manufacturing sector as a whole (US$25,329). Though raw materials are imported from all over the world, the cost for raw materials is about 35% of the total production cost[25] that is reasonable compared to other manufacturing sectors which spend 60% to 70% of the cost for the procurement of raw materials. However, there is price competition from Jordanian pharmaceutical companies as a leading exporter in the region. Considering higher wages of work forces and high transportation cost in Palestine and more importantly, the lack of any governmental support for the industry, it is not easy to further strengthen price competitiveness.

(b) Quality Competitiveness

The pharmaceutical industry has been making a great effort to enhance its quality by acquiring ISO14000 and ISO9000. As shown below, the pharmaceutical industry has been investing around US$5 million annually in new facilities or upgrading existing facilities to meet international standards and increase its production capacity. Since quality control and R&D are very important in this industry, the cooperation with local colleges of pharmacy, drug testing centers and academia provides good resources and environment for R&D. For the purpose of the export promotion, companies are required to be GMP (Good Manufacturing Practice) certified for entering new export markets such as the EU and the USA, for which some of Palestinian pharmaceutical companies already took necessary measures.

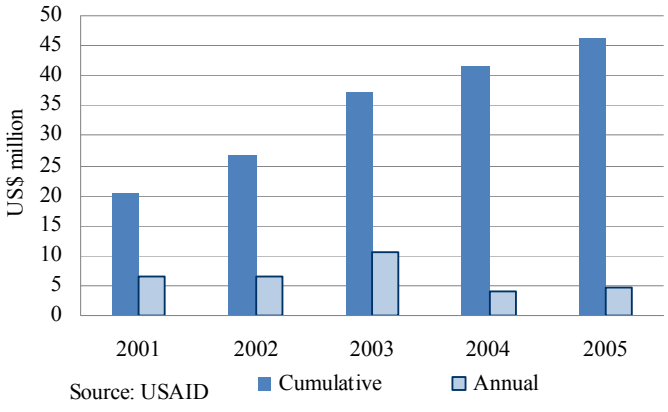
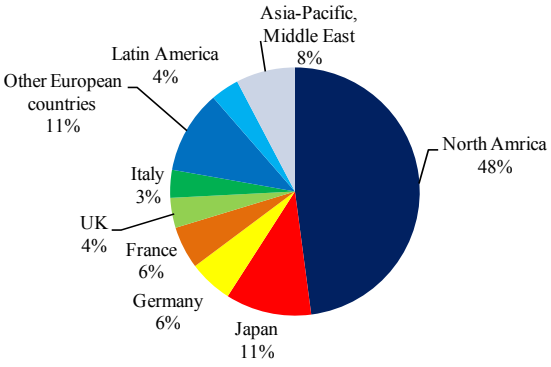


Figure 2.2.28 Capital Investment, 2001-2005

[25] Based on interview with Palestinian pharmaceutical company and *Cluster Competitiveness Assessment*, USAID, 2007

(3)-2 Analysis of Growth Potential

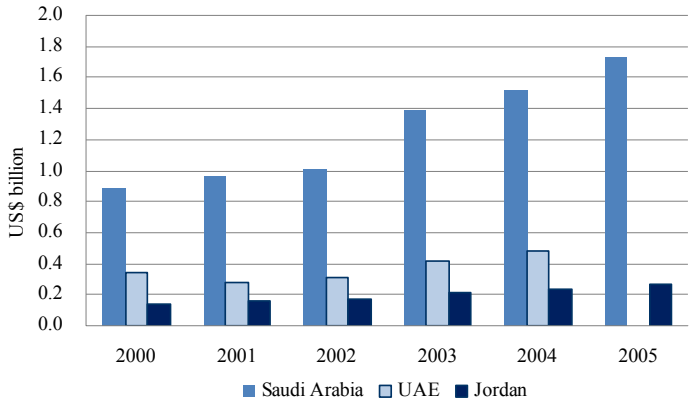
Global pharmaceutical market is expanding because of the population growth and the need for medication. North America is the biggest consumer in the world, which purchases many pharmaceutical products from Jordan based on FTA. According to the Jordanian pharmaceutical industry, in addition to generic medicines, there are potential and promising products for export, such as herbal medicine and biotechnology drugs for Western Europe and the USA, AIDS drugs, and vaccines and sera for Africa, anti-cancer and hormone drugs for Europe and MENA countries[26].



Source: Japan Pharmaceutical Manufacturers Association

Figure 2.2.29 Global Pharmaceutical Market, 2004

While Egypt, Israel and Turkey are the biggest pharmaceutical consumers in the region, growing demand comes from the Gulf countries which have limited domestic pharmaceutical production base. For example, Saudi Arabia imports 85% of pharmaceutical consumption. As shown below, the tremendous demand for importing pharmaceutical products exists in Saudi Arabia. In addition, the Gulf countries could become an attractive market from technical point of view, because the registration fee is cheaper in the region compared to the high price (around 100,000 euro) in the EU. Another relatively untapped potential markets are CIS countries such as Belarus, Azerbaijan and Kazakhstan, Russia and African countries.

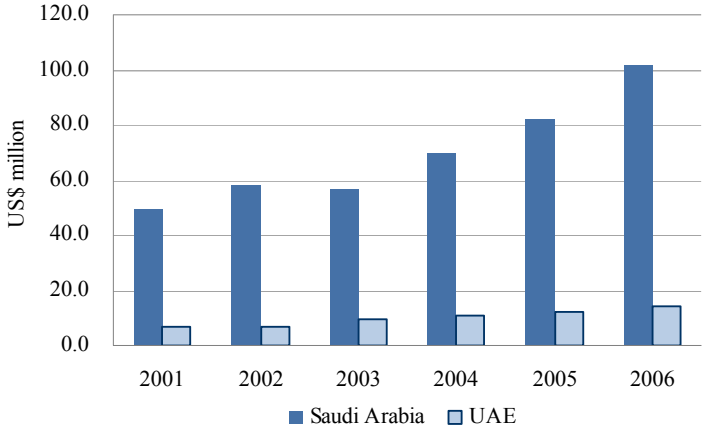


Source: UN Comtrade
Note: Data on UAE, 2005 is not available

Figure 2.2.30 Import of Pharmaceutical Products, 2000-2005

[26] Information from the Jordan Investment Board (JIB)

As stated earlier, Jordan has been a leading exporter of pharmaceutical products in the region. The export from Jordan to Saudi Arabia had increased since 2004 and it reached US$100 million in 2006. Jordanian pharmaceutical industry is rather developed such as medical infrastructure, high level of production efficiency, availability of human resources, existence of supporting industries and growing access to external markets, in particular to the USA and the EU markets. Jordanian pharmaceutical industry consists of 18 registered companies and the second largest exporting industries in Jordan, representing 20% of the GDP in 2005[27]. In addition, Jordanian pharmaceutical products are already registered in 66 countries world-wide. Most importantly, the Jordanian government has been supporting the pharmaceutical industry by financial incentives such as tax exemption on imported raw materials and high standard of intellectual property rights. For Palestinian pharmaceutical industry, it is necessary to strengthen marketing activities and marketing channel. Currently, around 15% of the total cost is distributed to marketing in the industry, which is comparatively high in the industrial sector in Palestine, but it is far below the international level because European companies usually spend 30 to 40% of the cost[28].



Source: Global Trade Atlas

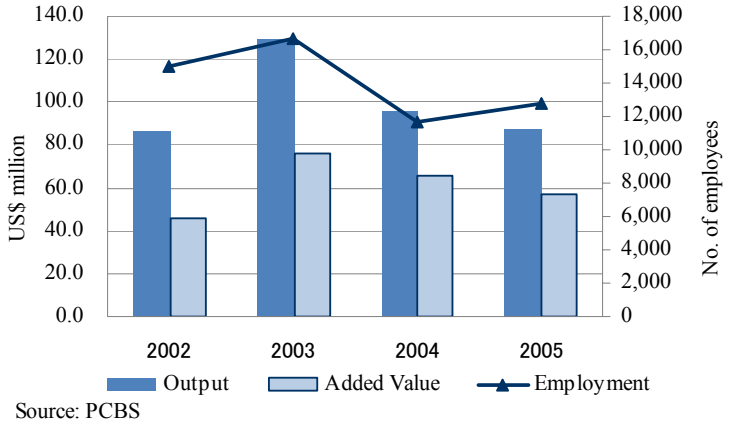
Figure 2.2.31 Pharmaceutical Import from Jordan, 2001-2006

2.2.6 Textile and Apparel

(1) Overview

In Palestine, many textile and apparel companies had been operating under the sub-contract with Israeli companies, which provided the biggest export market for the industry. However, both the output and added value have been decreasing since 2002, largely because of the fierce competition from China and Turkey. Many Israeli companies also relocated their production to Jordan and Egypt for cheaper labor forces. The output share is only 6% of the total output in manufacturing sector in 2005. Considering higher labor costs in Palestine, labor intensive industry like textile and apparel industry is facing serious external competition. However, the employment effect is still significant. Textile and apparel industry produced 12,739 jobs in 2005 which had increased again from 2004 and reached 23% of the total employment opportunities.

[27] *Jordan Pharmaceuticals and Healthcare Forecast Q2 2007*, Business Monitor International, 2007
[28] *Cluster Competitiveness Assessment*, USAID, 2007

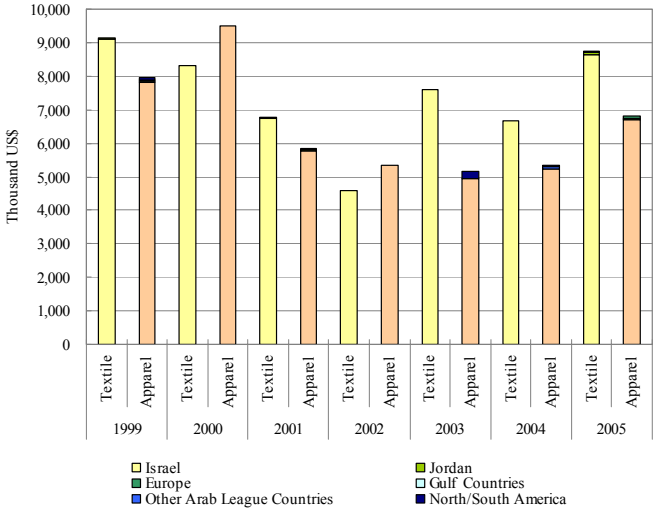


Source: PCBS

Figure 2.2.32 Output, Added Value and Employment, 2002-2005

(2) Export Performance

Export value of textile products accounted for US$ 8.7 million in 2005 and it represents 45 % of the total output (US$19 million, 2005). As for apparel, the export value was US$6.8 million, which is about 10% of the output (US$68 million, 2005). As is already explained, both textile and apparel industries in Palestine have been closely united with Israeli enterprises by sub-contracting relation. As a result, more than 90% of the export of textile and apparel products from Palestine is to Israel and this extremely high share of Israel has not been changing over the last decade. There are a few companies that are directly exporting their products. Both the export value and the destination outside Israel are very limited.



Source: PCBS

Figure 2.2.33 Palestinian Export of Textile and Apparel by Destination Country/Area, 1999-2005

(3)-1 Analysis of Competitiveness

(a) Price Competitiveness

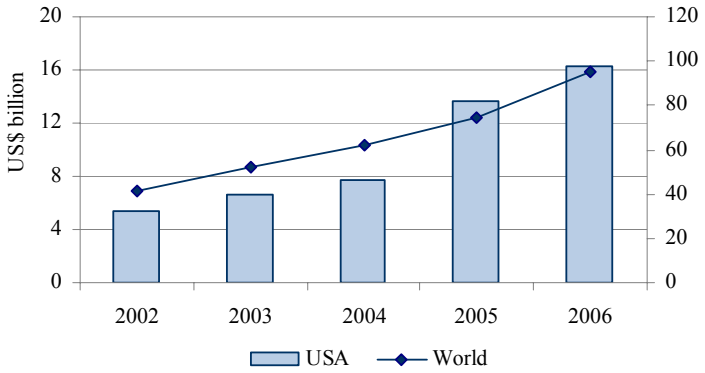
Labor intensive nature of the industry results in the loss of price competitiveness because of higher wages of workforce in Palestine, which is twice or three times higher than in Egypt and Jordan. Labor productivity in the industry is the lowest among all manufacturing sub-sectors. Most of raw materials and semi-manufactured materials are imported from abroad. As a result, labor and material costs accumulate nearly 70% of the total production cost (PFI estimate). Therefore, even in the local market, textile and apparel products lost their price competitiveness against cheaper imports, whereas not only China and Turkey but also India, Pakistan and Bangladesh and some Arab countries participate in the price war in the textile and apparel market.

(b) Quality Competitiveness

Being suffered from serious price competition, it is difficult for the textile and apparel industry to improve or even maintain the quality of products. In most of factories, the introduction of new technology is not possible and obsolete technology has been utilized. According to PFI, the quality of Palestinian products is hardly acceptable even in the local market and consumers complain the low quality of fabrics and non-permanent colors. To be competitive in external market, it is crucial for Palestinian companies to enhance the quality of products. According to a Palestinian company producing high quality products, their sales are growing in USA and Israel where consumers are keen on quality and price range is higher than the local or regional market. For instance, the price of local (Israeli) products is around 5% higher than Palestinian products in Israeli market. On the other hand, it is rather difficult to be competitive in the regional market, such as Jordanian market where much cheaper products from China and others have dominating presence. Therefore, USA and Israeli market could remain potential markets for the textile and apparel industry as long as quality of products is strengthened. Needless to say, efforts to reduce production cost and maintain the price competitiveness are also necessary.

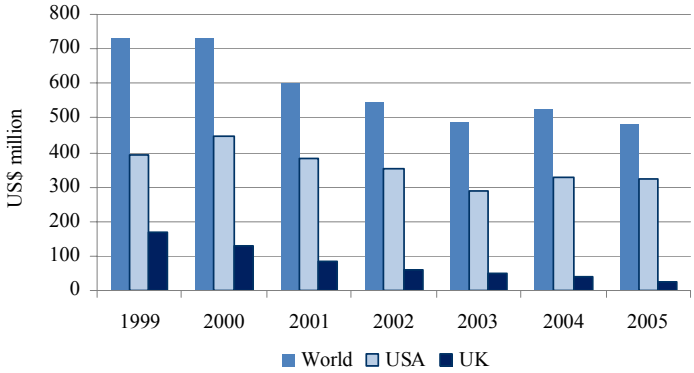
(3)-2 Analysis of Growth Potential

The fierce price competition takes place in the textile and apparel market worldwide. Even in the Palestinian local market, the share of Chinese and Turkish products reached 80% according to PFI. As shown below, in response to the penetration of Chinese products in the global market, textile and apparel exports from Israel has declined since 2000. In 2005, *the termination of the Multi-Fiber Agreement* (MFA) ended the quota system, which would have a negative impact on textile and apparel industry in many developing countries. The environment surrounding Palestinian textile and apparel industry becomes also difficult.



Source: UN Comtrade
Note: SITC Rev.3 (84)

Figure 2.2.34 China's Export of Clothing and Apparel, 2002-2006



Source: UN Comtrade

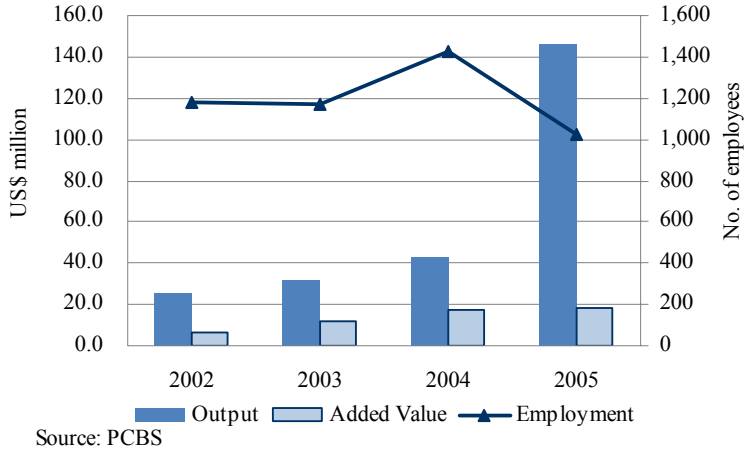
Figure 2.2.35 Israeli Export of Clothing and Apparel, 1999-2005

On the other hand, there is a slight hope for the development of niche market products such as fabrics, trimmings, accessories and some Palestinian traditional embroidery. While vast majority of products are exported to Israel or other countries under Israeli brand names, new markets in the USA, the EU and Arab countries explain the diversification of external market. Free trade access to the USA, the largest consumer of apparel products, and the EU, in addition to Arab countries, would provide favorable terms for Palestinian textile and apparel export. It is worth mentioning that QIZ in Jordan created new employment opportunities and attracted new investments from India and China in a very short time. The Jordanian apparel exports to USA increased from US$52 million to US$583 million in 2003.

2.2.7 Rubber and Plastic

(1) Overview

The output of rubber and plastic industry grew significantly from US$40 million in 2004 to more than US$140 million in 2005, whose share is 11% of the total output. Also, rubber and plastic industry achieved the second highest labor productivity (US$143,038) after tobacco products in the industrial sector. However, employment effect is not significant at all. Rubber and plastic industry provides less employment opportunities than before and created 1,024 jobs in 2005, representing only 2% of the total employment.



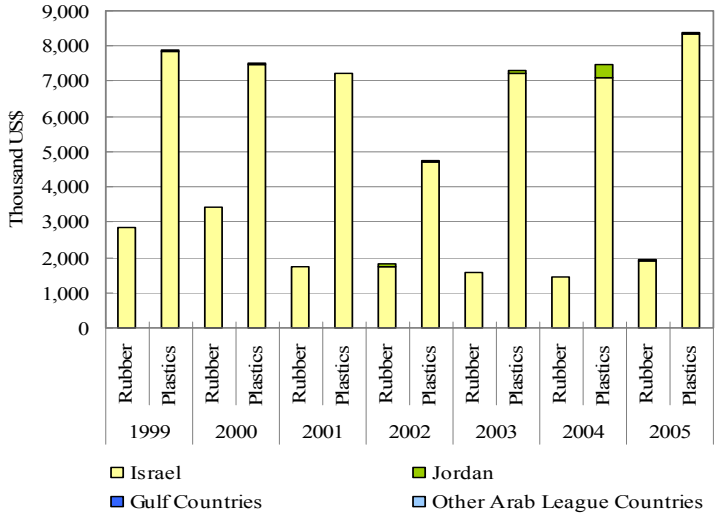
Source: PCBS

Figure 2.2.36 Output, Added Value and Employment, 2002-2005

(2) Export Performance

Export value of plastic and rubber products were US$ 8.4million and US$1.9 million respectively in 2005. The total of US$10.3 million represents approximately 7% of total output of the rubber and plastic industry (US$146 million in 2005).

Both rubber and plastic industries are exporting wide range of products. The main exported products include tires, its inner tubes and conveyer belts for rubber, and tubes and pipes for plastic industry. For both industries, export is slightly growing but more than 90% of the export is destined to Israel and the other export destination is limited.



Source: PCBS

Figure 2.2.37 Palestinian Export of Textile and Apparel by Destination Country/Area, 1999-2005

(3)-1 Analysis of Competitiveness

(a) Price Competitiveness

Since rubber and plastic industry is dependent on imported raw materials from abroad, it is difficult to strengthen the price competitiveness. Due to movement restrictions and frequent closures, the stable supply of raw materials is not secured and the transaction cost becomes high. The price of raw materials is increasing, too. For example, the demand for petrochemical products such as ethylene which is a major building block for plastics, chemical fibers and synthetic rubber, is expanding. Such demand for raw materials led to the increase in price of ethylene. According to some rubber company in Palestine, the cost for raw materials was only 40% in 2002, but it increased up to 55% in 2007. On the other hand, vast majority of products are exported to Israel. In the Israeli market, Palestinian products are competitive in terms of price against products from Europe, but its quality requirement is strict as explained later. According to plastic companies, price competition is fiercer in Jordanian market, since the price of local (Jordanian) products and imports from China is 20% to 40% cheaper than those from Palestine. However, even in the Jordanian market, Palestinian products are competitive in terms of price compared to European products. On the other hand, in Israeli market, most of the local (Israeli) products as well as imported products are the same in price or even higher than Palestinian products.

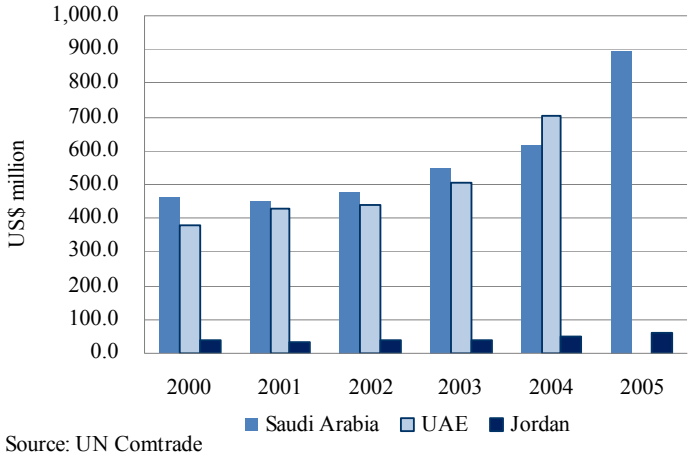
(b) Quality Competitiveness

To compensate for limited price competitiveness in general based on higher wages, dependency on imported raw materials and high transportation cost, rubber and plastic companies have been trying to improve the quality of products. For some companies, the quality of plastic products is enhanced by introducing molding technology from Israel. Molding technology is a basis for product design and development as well as for the variation of products, all of which are closely related to the quality of products. In exchange for technology and experiences, skilled labor forces are available in Palestine, which is important input for rubber and plastic industry. Such complementary relationship with Israel consequently strengthens the quality of Palestinian products in the rubber and plastic industry. It should be noted that plastic companies in Palestine have to obtain the standard mark certified by *the Israeli Standard Institution* (ISI) to enter the Israeli market, which requires high quality of product standards.

(3)-2 Analysis of Growth Potential

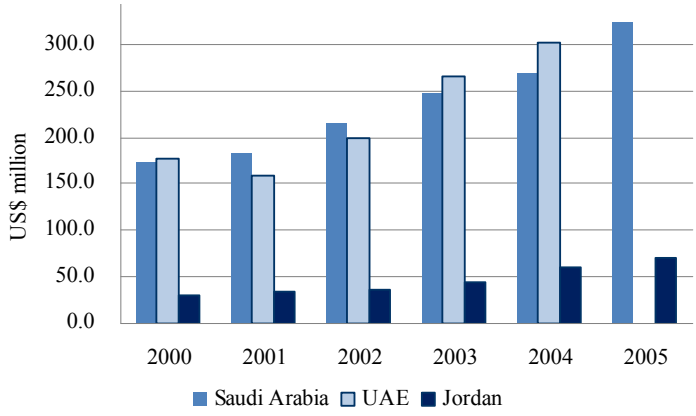
Currently, the global rubber and plastic market is growing, partly because rubber and plastics are used as replacement for metals such as motor and gear, bearings, plastic bumpers and body panels in automobile sector; wire and cable and packaging in electronics sector; medical packaging; and structural components. According to *the Business Monitor International* (BMI), plastic industry is expanding in the Middle East for consumption of rubber, plastics

and processed plastics. The construction sector's growth in UAE has driven the demand for plastic products, especially pipes, tubes and fittings. In addition, the population growth increases the demand for house-wares, commercial and industrial containers made of plastics. In addition, various industries such as the pharmaceutical industry and furniture industry started to use plastic products as substitutes for metal products. However, as domestic plastic industry is competitive in UAE, import of pipes, tubes and other construction related accessories is to some extent limited while the dependency on imported products is higher in the case of bottles, containers and miscellaneous products like toys and household goods[29].



Source: UN Comtrade
Note: Data on UAE, 2005 are not

Figure 2.2.38 Import of Rubber Products, 2000-2005



Source: UN Comtrade
Note: Data on UAE, 2005 are not available

Figure 2.2.39 Import of Plastic Products, 2000-2005

According to the interviews with rubber and plastic companies in Palestine, growth potential is limited in Jordanian market because of fierce price competition from local (Jordanian) products, whereas the promising market is UAE where price range is higher and Palestinian products could remain to be competitive. However, the lack of marketing channel prevents them from entering potential new markets.

[29] *Chemicals Forecast 2007,* Business Monitor International, 2007

2.2.8 Agriculture

(1) Overview

The production of agricultural sector is coming to reach US$1 billion while added value produced by the sector is around US$400 million in 2005. Despite the downturn of Palestinian economy after the Intifada in 2000, agriculture sector remains relatively stable without sharp decline in its production and added value.

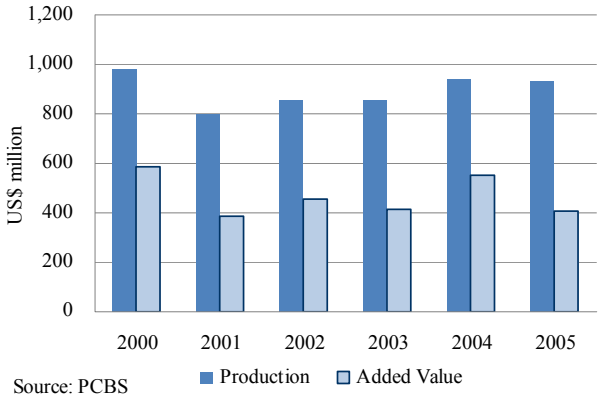


Figure 2.2.40 Production and Added Value of Agricultural Sector, 2000-2005

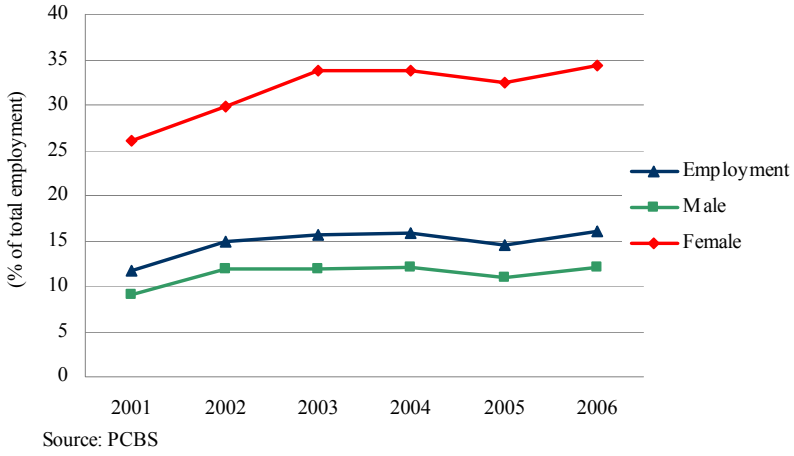
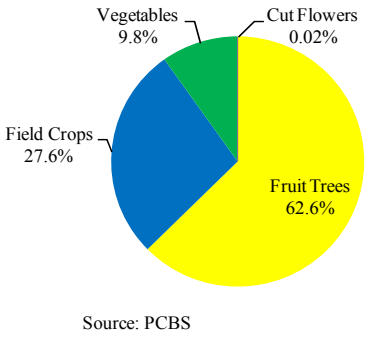


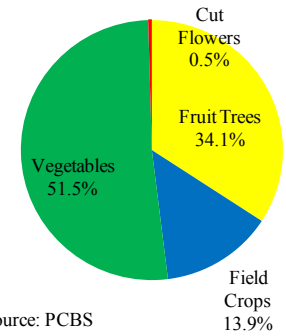
Figure 2.2.41 Employment in Agricultural Sector, 2001-2006 (% of total employment)

With regards to employment, agriculture is an important sector, too. It provides not only more than 15% of the total employment, but also around 35% of the total female employment. The percentage share of employment provided by agricultural sector has been growing since 2001 to 2006.In terms of plant production area, nearly 90% of the cultivated area is used for fruit trees and field crops, and vegetables are produced in only 10% of the total area. In terms of the value of production, vegetables produce more than half of the total production value.



Source: PCBS

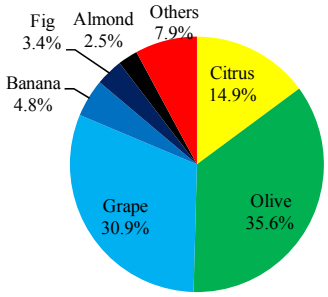
Figure 2.2.42 Areas of Plant Production, 2004/2005



Source: PCBS

Figure 2.2.43 Value of Plant Production, 2004/2005

With regards to fruit trees in the West Bank, olive and grape are the two major products with 35.6% and 30.9% of the total plant production respectively. Citrus such as oranges, lemons and grapefruits are the third largest product with 14.9% of the total production.



Source: PCBS

Figure 2.2.44 Production of Fruit Trees, 2004/2005

Various kinds of vegetables are produced in the West Bank. Major products with large production are tomatoes and cucumbers with nearly 100,000 metric tons, followed by eggplant, squash and cauliflower.

Table 2.2.6 Production of Vegetables in the West Bank, 2004/2005

Product	Productioin (metric ton)
Tomato	101,021
Cucumber	89,084
Eggplant	43,395
Squash	31,268
Cauliflower	14,041
White Cabbage	9,843
Jew's Mallow	6,732
Maize	6,167
Broad Bean	3,895
Kideny Bean	3,819
Chick-peas	3,661
Snake Cucumber	3,647
Okra	2,840
Hot Pepper	2,309
Paprika	2,215
Muskmelon	2,210
Spinach	2,132
Others	10,612
Total	**338,891**

Source: PCBS

Regarding field crops produced in the West Bank, major products are wheat and dry onion, which represent nearly half of the total field crops production. In addition, barley and potato are relatively large in production. Despite very small quantities, herbs and spices are produced, too.

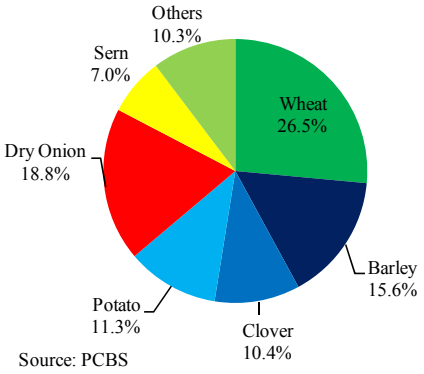
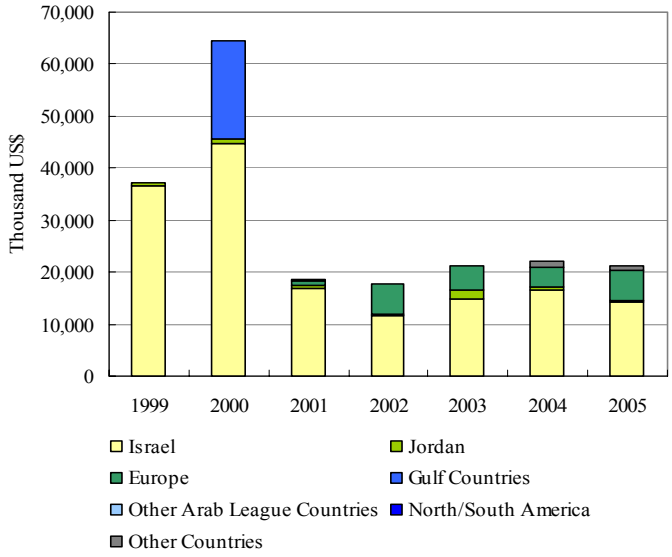


Figure 2.2.45 Production of Field Crops in West Bank, 2004/2005

(2) Export Performance

Palestine has been exporting a range of agricultural products such as meat, vegetables and fruits. However, the Intifada in 2000 gave significant negative impact to the export of agricultural products. Movement restriction on the border as well as inside Palestine is a serious obstacle. Closures in harvesting season may damage or ruin the crop. The cost it incurs and the undermined reputation due to frequent delay of delivery are not negligible. The share of export in total production value went down to around 2 to 2.5% while it was around 5% before the Intifada.



Source: PCBS

Figure 2.2.46 Palestinian Export of Agricultural Products by Destination Country/Area, 1999-2005

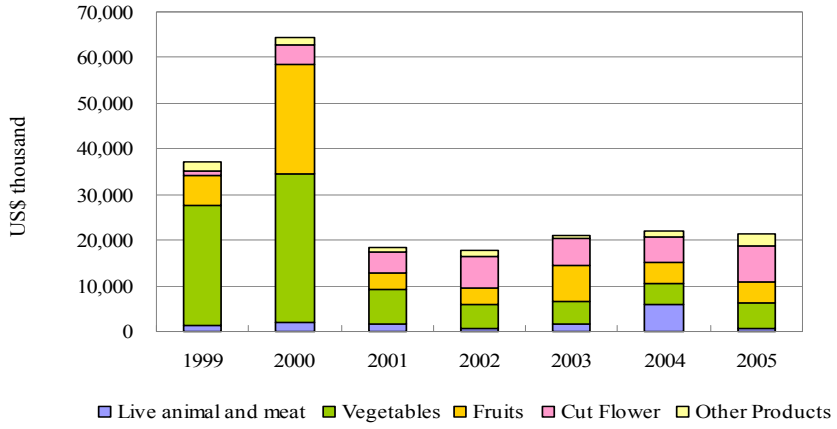
Table 2.2.7 Value of Agricultural Production and Export in Palestine, 1999-2005

(Thousand US$)

	1999	2000	2001	2002	2003	2004	2005
Value of Agricultural Production	760,639	979,817	801,601	855,844	856,045	940,079	932,315
Value of Export	37,146	64,340	18,445	17,715	21,114	22,146	21,335
% in Total Production	4.88%	6.57%	2.30%	2.07%	2.47%	2.36%	2.29%

Source:PCBS

The following figure shows the export by type of products. Before 2000, the export of vegetables represented more than half of total export of agricultural products. Since 2001 the export of vegetable decreased sharply mainly due to diminished sales to Israel and in return the share of fruits and cut flowers in total export became larger.



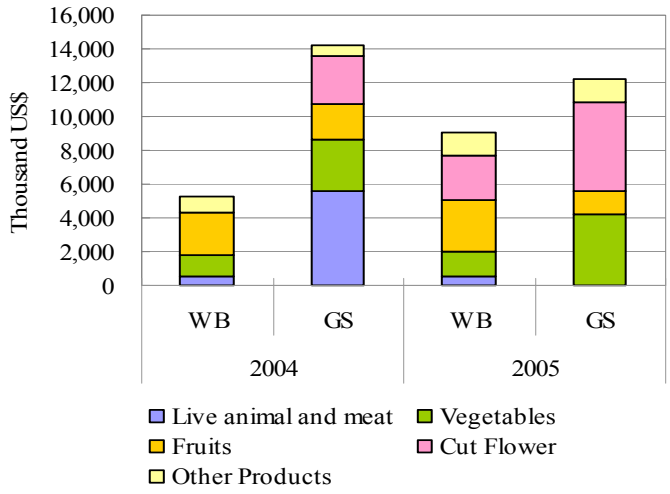
Source: PCBS

Figure 2.2.47 Palestinian Export of Agricultural Products by Type of Products, 1999-2005

Main exporting vegetables include tomatoes, cucumber, peas and beans, eggplants, green peppers and potatoes. As for fruits, main exporting products are all kinds of edible nuts, oranges, watermelons, strawberries and dates. As for cut flowers, carnation is the main product.

Seasonal and planting cycle differences give advantage to Palestinian products for the export to other markets. For example, vegetables can be harvested in winter in Palestine, when the supply from domestic market is limited in Europe. In addition, many Palestinian products can benefit from free trade agreement with the EFTA, the EU, the USA, Canada, the Arab League Countries and turkey that waives tariffs on Palestinian products.

Comparing the West Bank and the Gaza Strip, the Gaza Strip produces higher export value of agricultural products, whereas its agricultural production volume itself is lower than the West Bank. This is due to the export of some cash crops, such as strawberries and cut flowers from the Gaza Strip to Israel and European countries. In 2005, cut flower accounts for more than 40 % of total agricultural export from the Gaza Strip.



Source: PCBS

Figure 2.2.48 Export of Agricultural Products (West Bank and Gaza Strip), 2004-2005

In terms of export destination, most part of the export of agricultural products was destined to Israel until 2001. But in recent years the market of Palestinian agricultural products is gradually expanding to Jordan, Europe and the Gulf Countries.

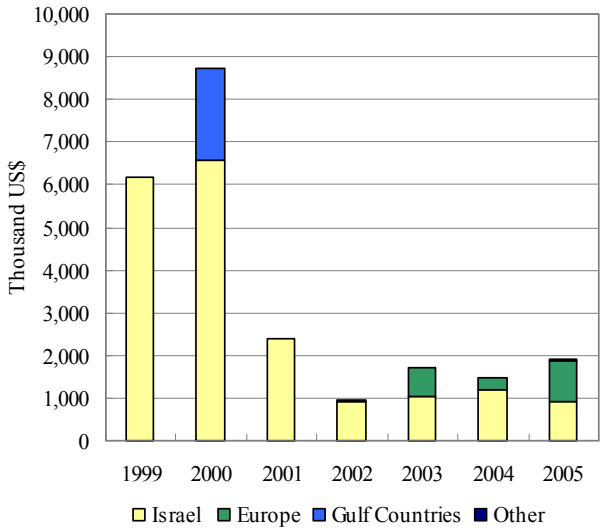
Table 2.2.8 Palestinian Export of Fresh Fruits and Vegetables by Destination Country/Area, 1999-2005

(Value in Thousand US$, Percentage in total value in respective year)

	1999	2000	2001	2002	2003	2004	2005
Israel	36,491.53	44,729.88	16912.08	11542.16	14,908.10	16,566.427	14,103.96
	98.24%	69.52%	91.69%	65.15%	70.61%	74.80%	66.11%
Jordan	654.32	848.12	564.03	324.75	1,527.21	464.201	498.36
	1.76%	1.32%	3.06%	1.83%	7.23%	2.10%	2.34%
Europe	0	0	923.16	5,827.61	4,651.29	3,832.64	5,625.84
	0%	0%	5.01%	32.90%	22.03%	17.31%	26.37%
Gulf Countries	0	18,762.08	45.41	20.30	25.58	75.780	102.91
	0.00%	29.16%	0.25%	0.11%	0.12%	0.34%	0.48%
Other Arab League Count	0	0	0	0	0	0.336	32.36
	0%	0%	0%	0%	0%	0.00%	0.15%
North/South America	0	0	0	0	0	0.334	0.64
	0%	0%	0%	0%	0%	0.00%	0.00%
Other Countries	0	0	0	0.66	1.97	1,206.718	970.81
	0%	0%	0%	0.004%	0.01%	5.45%	4.55%
TOTAL	37,145.85	64,340.08	18,444.68	17,715.48	21,114.14	22,146.43	21,334.88
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

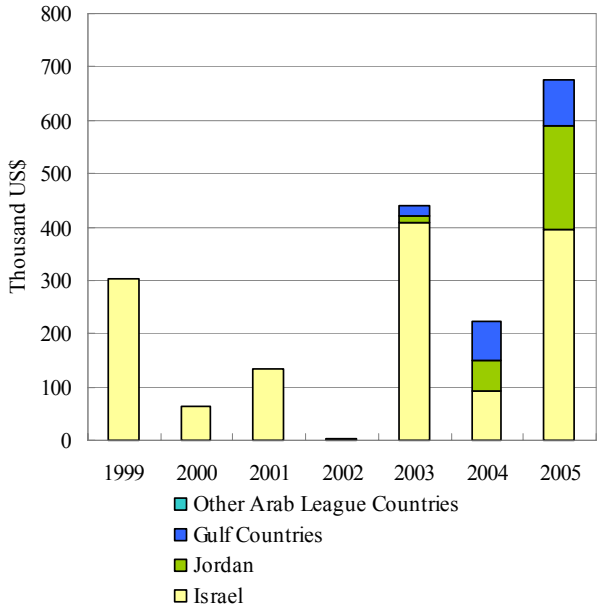
Source: PCBS

Tomato is one of the products that are expanding their exporting market rather rapidly. Majority of export of Tomato used to go to Israel, but since 2003 its export to European Countries is increasing as shown in the following figure. This emergence of new market is also observed in watermelon export, where there are increasing exports to Jordan and Gulf countries since 2003.



Source: PCBS

Figure 2.2.49 Palestinian Export of Tomatoes, 1999-2005



Source: PCBS

Figure 2.2.50 Palestinian Export of Watermelons, 1999-2005

(3)-1 Analysis of Competitiveness

(a) Price Competitiveness

In general terms, the price of agricultural products are higher compared to those produced in neighboring countries such as Jordan and Egypt. Not only labor cost but also any other inputs such as seeds, fertilizers and pesticides are expensive in Palestine. Another problem is transportation cost, which has been nearly doubled after the second Intifada in 2000[30]. Under current situations, frequent delivery delay and increasing cost for storage and cooling system impose financial burden on producers in Palestine and weakens the price competitiveness. On

[30] *The Palestinian Cash Crops Sector: Trade Development Strategy*, PalTrade, 2004

the other hand, one of the factors which prevent the reasonable pricing is the absence of grading system. The lack of grading system means the lack of differentiation of prices according to size, color, shape, quality, and so on. As a result, the current pricing is not related to proper grading system which would bring about the maximization of profits.

(b) Quality Competitiveness

According to PalTrade, cash crops in Palestine are largely characterized by low quality control, minimal if any grading, poor inspection, basic packaging techniques and limited storage and handling facilities. In other words, proper quality control at the production level is hardly achieved. There are some requirements and international standards such as HACCP and EurepGAP (Euro-Retailer Produce Working Group Good Agricultural Practices) for agricultural products, but most of small-sized farmers have no financial resources to invest in facilities, technologies and human resources. Also, packaging and labeling is weak in Palestine, which is increasingly important and complicated for exporting products, especially to Europe.

(3)-2 Analysis of Growth Potential

The most significant strength for growth potential is seasonal difference for many cash crops based on planting and cultivation cycle. For example, while vegetables such as tomatoes and eggplants are cultivated at the beginning of April in European countries, their cultivation season is between October and April in Palestine. Similarly, the cultivation of seedless grapes in the Jordan Valley is in May, which is two months earlier than in Europe. Thus, such seasonal difference opens the path to compete with cash crops from Europe. The EU market for fresh fruits is 75 million tons in 2005 and the consumption increased by 3.6% from 2000 to 2005. The EU market for fresh vegetables is 62 million tons in 2005 and the consumption increased by 1.5% from 2000 to 2005[31]. Though the EU market is characterized by high rate of internal supply of fruits and vegetables, developing countries play a significant role in exporting peas, beans and some other products during the off-seasons. In addition, one favorable environment for Palestinian agricultural products is the tax free trade agreements with Arab countries, the EU, the EFTA, the USA and Canada.

In the Gulf countries, high rate of population growth and the increase in income per capita contribute to increasing consumption of fresh vegetables and fruits. In addition, the access to their market through Jordan provides Palestine with preferable environment for the trade. On the other hand, there is fierce competition in the region from Syria, Lebanon, Jordan and Egypt with their price competitiveness based on cheaper labor forces and production costs. Furthermore, it should be noted that agricultural products are usually exported through the Israeli export marketing firm, Agrexco to the external markets. Vast majority of Palestinian farmers have neither export capacity nor any knowledge about export marketing. Therefore,

[31] *CBI Market Survey: The Fresh Fruit and Vegetables Market in the EU*, CBI, 2006

the development of products according to the market needs and the enhancement of quality standards which are required for the export promotion have been hardly achieved by themselves.

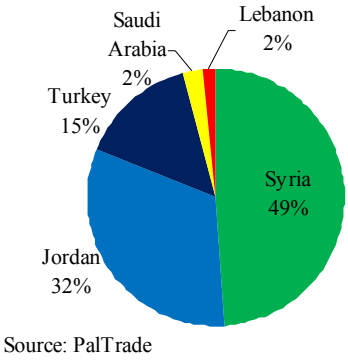


Figure 2.2.51 Major Exporters of Tomatoes to the Gulf Market, 2004

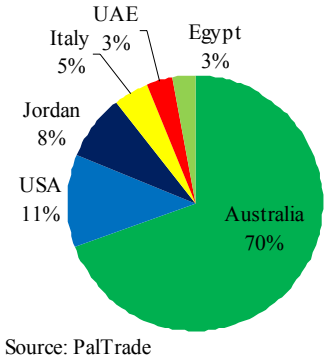


Figure 2.2.52 Major Exporters of Strawberries to the Gulf Market, 2004

(4) Potential Products

(a) Agricultural Primary Products

Table 2.2.9 SWOT Analysis of Agricultural Primary Products

Strength	Weakness
-Production of higher added value products in the West Bank, e.g. cherry tomato, sweet pepper -Use of organic fertilizers and general organic nature of farming practices in Palestine -Price competitiveness against European products	-High cost, limited availability, low quality of farm inputs, e.g. fertilizer, seeds -Insufficient quality assessment (grading) -High cost of storage and transportation -Lack of external market information -Lack of EurepGAP certification
Opportunity	**Threat**
-Advantage of seasonal difference to export to Europe -Large share of tropical/subtropical fruits imports from developing countries in the EU market -High demand for fresh fruits and vegetables from the Gulf countries with limited agri. land -Sweet pepper, dates and seedless grapes during off-season -Potential market for fresh herb export	-Competition from Egypt, Turkey and Jordan -Fierce competition for cherry tomatoes in the region -Small market for temperate fruits and vegetables in northern European market -Sudden closures and restrictions on movement -Time-consuming customs clearance and export procedures damaging the freshness

CHAPTER 3 INVESTMENT ENVIRONMENT

3.1 Overview of Investment Trend

Following *the Oslo Accord* signed in 1993 between Israelis and Palestinians which resulted in the establishment of PNA, and following *the Paris Protocol* signed in 1994, which defined the PNA as a separate customs territory, investments started flowing into Palestine in an unprecedented manner since more than 40 years.

At this time, PNA realized that it was necessary to issue a new investment encouragement law that will promote investment in Palestine, furthermore giving competitive incentives relative with the region, and provide investors with the regulations that protect their investments. The Palestinian law on the encouragement of investment was issued in its first version in the year 1995, when foreign investments started coming into Palestine, and then amended the law after 3 years in 1998 and stayed until today.

PIPA was established in 1998 as an autonomous agency of PNA, following the promulgation of the Investment Promotion Law. Its mission is to create and maintain a competitive investment environment by providing high-quality services and incentives to foreign and domestic investors, and facilitating cooperation between the private sector and the government. It was supposed to be a one-stop-shop for local and foreign investors, but bureaucracy continued to be a major constraint on its work.

In 2006 projects with the value of US$ 15 million benefited from the investment law, covering industrial projects like stone quarries and factories for ready cement and a hospital and some recreational projects. In the past few years, Palestinians focused their investment on the stone and marble sector which was traditionally considered as the most profitable industry in Palestine.

Actually, during the years 1998-2006 twenty stone and marble quarries have been established in the city of Hebron and ten more in Bethlehem. During the same period, the new investment amount in the West Bank were US$ 63 million in the industrial sector, US$ 54 million in the tourism sector, and US$ 55 million in the service sector. While Ramallah city took most of the investments in the service sector (US$ 43 million), as it is considered to be the service capital of Palestine, Bethlehem city received most the investment related to the tourism sector (US$ 32.5 million). Hebron received most of the investments in the Industrial sector (US$ 20 million) in the same period 1998-2006, as it is considered the industrial capital of Palestine. Jericho did have it share of the investments in the industrial sector amounting to US$ 13 million, and US$ 7 million of investments in the tourism sector. During this period, there were 203 new projects invested, totally amounting to US$ 175 million.

PIPA work has been frozen after the Second Intifada started in September 2000 and almost no international investors came to Palestine, because of the extreme instability of politics and

security. Furthermore, the presidency and consecutive governments since 2001 were mostly paying attention to stop the deterioration of the security situation and trying to stabilize the situation as much as possible, without being able to work out economic policies and strategies for economic development.

In spite of the difficulties and challenges that faced PNA, it was possible to achieve many of the development objectives in a relatively short period of time (1994-2000). The results were evident in the improvement of economic growth rates, increased employment rates, improvements in the institutional capacity and human resources of the various PNA institutions, as well as improvements in the general social and economic conditions as a result of policies, which encouraging the private sector investment.

PNA objective was always to develop and promote the private sector with focus on foreign direct investment in order to expand business opportunities, and placing emphasis on export oriented sectors with a comparative advantage. PNA held a number of conferences for Palestinian expatriates to attract Palestinian investment from abroad. These rich Palestinians living abroad had the biggest share of the foreign direct investments that took place before the Second Intifada of 2000 started.

The foreign direct investment that entered into the country during the period 1995-1999 was a good motivation for an increased domestic direct investment. This was the reason for an economic boom in that period.

In 2000, the revenues were estimated at US$ 1,386 millions; 70% of which are from local resources, which was 7% higher than revenues collected in 1999. The tax revenues also had increased by 8.4% (Economic Monitor Report, April 2000).

The Palestinian economy was hit hard by the Second Intifada that started in September 2000, and the Israeli severe measures of destruction, siege and closures have caused a tremendous and serious setback to the Palestinian economy. The GDP declined by 50%; unemployment jumped to 40% and exceeded 60-70% in some areas, per capita annual income fell to US$ 830 in 2000 compared to US$ 1,760 in 1999. (Public Budget Bill for 2003: Finance Minister's Statement 31/12/2003).

Unfortunately, since the end of September 2000 and as a result of the Israeli reoccupation of the West Bank and parts of the Gaza Strip and the destruction of infrastructure and continued Israeli policies of closures, curfews, and settlement expansion, these achievements were severely damaged leading to a massive decline in all the socio-economic indicators to levels far worse than the Pre 1994 period of the direct Israeli occupation.

In the year 2003, investment equaled US$1.13 billion, which is 46% lower than in 1999. Two thirds of consumption and investment were financed by domestic production and the remaining third was served by foreign production (imports). Palestinian net imports amounted to US$2.34 billion in 2003. The share of total investment in GDP dropped from 43 % in 1999 to 27 % in 2004.

In the year 2005, US$ 400 million were domestically invested in the industrial projects, like cement, construction, food, paper and packaging industries. US$100 million were invested in the health sector, US$150 million in the education sector and vocational training, and US$250 million in the tourism industry. Domestic investments were also directed to the service sector

where US$200 million were invested in IT, insurance, banking and financial mediators, shipping and consultancy. Finally, US$150 million of domestic investment went to the agricultural sector, including the development of the animal and fish industries.

Following the formation of the *Hamas* lead government in 2006, and the international political and financial boycott of the government, the economy suffered a lot, and the siege was even more tightened on the economy.

Following *Hamas* takeover in the Gaza Strip, President Abbas asked Dr. Salam Fayyad to form a new government and siege was lifted on the West Bank. Now, there are trials to improve the economic situation in the West Bank, and encourage Israeli-Palestinian joint investment projects as recommended in the last World Economic Forum held in the Dead Sea last April. While GDP per capita equaled US$ 299 in the second quarter of 2006, the economic indicators will improve in the West Bank for the coming few months at least.

3.2 Issues and Challenges for Investment Environment

3.2.1 Taxation: Income Tax, Property Tax, Taxes on Domestic and Foreign Goods

The following is a description of the present tax system.

(1) Income Tax

Effective since January 2005, the Income Tax Law (ITL), based on the US dollar, applies to the income of individuals, companies and some institutions.

(a) Individuals

Base: The tax is levied on residents on a universal basis (including income from work, craft, business, profession or vocation, and accruing as salaries or wages, profits, dividends, rent, and interest).

Table 3.2.1 Palestinian Income Tax Schedule*

Yearly Taxable Income (US $)	Rate (%)
Individuals	
1-10,000	8
10,001-16,000	12
More than 16,000	16
Companies	
Domestic	15
Foreign	16

*Income tax law Number 17 for the year 2004.

Deductions: The taxable income is calculated after allowing for the following deductions:

- US$ 3,000 for the resident tax payer.

- US$ 500 for each parent, spouse, and dependent child.
- US$ 2,500 for each dependent enrolled in higher education institute, except those with scholarship.
- A deduction for the rent paid by the tax payer with a yearly maximum of US$ 2,000.
- A once-in-a-lifetime deduction of US$ 5,000 for buying or building a house.
- A deduction for medical expenses paid by the tax payer or his/her dependents provided the total does not exceed the income subject to tax.

(b) Companies

Base: Corporate profits

Exemptions: The Investment Promotion Law adopted in 1998 allows for the following exemptions:

- Five years exemptions for a project with a paid-up capital between US$ 100,000 and US$ 1 million. Additional eight years of paying a tax rate of just 8% on net profit.
- Five years exemptions for a project with a paid-up capital between US$1 million and US$ 5 million. Additional twelve years of paying a tax rate of just 10% on net profit.
- Five years exemption for a project with paid-up capital of more than US$ 5 million. Additional sixteen years of paying a tax rate of just 10% on net profit.
- A special exemption may be granted to certain projects by the Cabinet of Ministers, upon the recommendations of the *Palestinian Higher Agency for the Encouragement of Investment* (PHAEI), depending on their nature and the priorities of the Palestinian development program.

Table 3.2.2 Tax Exemption on Investment Outside and Inside IE/FZ

Investment Size	Investment outside IE/FZ	Investment inside IE/FZ
US$100,000-US$1 million	5-year tax holiday - 10% income tax on net profits for an additional 8-year period.	7-year tax holiday – 10% income tax on net profits for an additional 8-year period.
US$1-5 million	5-year tax holiday - 10% income tax on net profits for an additional 12-year period.	7-year tax holiday – 10% income tax on net profits for an additional 12-year period.

Over US$ 5 million	5-year tax holiday - 10% income tax on net profits for an additional 16-year period.	7-year tax holiday – 10% income tax on net profits for an additional 20-year period.

(2) Property Taxes

(a) Buildings and Non-farmed Land

Base: Buildings and land within municipalities.

Rates: 17% of the net annual value (net value= gross value-20% depreciation)

Base: Buildings and land outside municipalities.

Rates: 10% of the net annual value.

(b) Farm land tax

Base: All land planted with fruits and vegetables.

Rates*:* Varies from year to year and according to crop.

(3) Taxes on Domestic Goods and Services

(a) Value Added Tax

Base: All domestically-produced goods and services (after deductions of purchases of intermediate goods)

Rates: 16% except for zero-rate on exported goods, tourist services and fruits and vegetables.

(b) Purchase Tax

Base: On all the wholesale prices of consumer goods, and several raw materials and processed goods.

Table 3.2.3 Purchase Tax for Selected Goods

Item	Rate (%)
Cigarettes	62% of the consumer price before adding VAT+ 66.20 NIS for every 1000 cigarettes
Alcohol	32%, 66%, 72%, 127.2% or 192% (according to alcohol content)
Cars	75%
Electric Equipment	10%, 15% and 45%

Exemptions: Conditional exemptions apply to certain products in the education, health, industry and agriculture sectors.

(c) Fuel Tax

Base: A specific rate for 1,000 litters updated every three months, according to the rise in consumer prices.

Rates: Gasoline: US$489.73, Diesel oil: US$223.23, Kerosene: US$223.23

(4) Taxes on International Trade

(a) Custom duties

Base: On the c.i.f. (cost, insurance and freight) value of imports.

Rates: From 0 to 340% for food, animal and agriculture products, and from 0 to 22% for all other products.

(b) Purchase tax

Base: c.i.f. value of imports + customs + TAMA[1]

Rates: 5-200%

(c) Value added tax

Base: All imported goods.

Rates: 16%.

3.2.2 Legal Issues

As part of the process for establishing the foundations of a new state, Palestinians have initiated a substantial effort at creating legislation that addresses essential economic and financial activities, and shaping a sound legislative framework to support the development and sustainability of the economy, particularly with respect to the private sector.

There are still substantial legislative gaps that should be filled, particularly with respect to essential laws applicable to the private sector (Civil Law, Commercial Law, Foreign Trade, Insurance Law, Mining and Natural Resources Law, Customs Law, Intellectual Property, Competition Law, Criminal Law and Laws applicable to security on movables and real estate), including legislative vehicles to support small and medium size companies ("SMEs"), typical engines of growth in emerging markets (leasing, microfinance, credit cooperatives). It should be noted however, that some of these laws have been drafted and are under consideration at different levels within the PNA.

The PNA, through the Ministry of Economy, has launched a concerted effort to improve the regulatory environment, streamline the firm registration procedure and inform businessmen of

[1] TAMA is a calculation procedure that reflects domestic wholesale price as the basis of valuation.

regulatory requirements and what they should expect. However, there remain a number of other investment climate issues that affect the Palestinian private sector. The court system is slow and inefficient, which dissuades most firms from using it.

There are numerous text improvement opportunities that should be materialized. There are few provisions on conflicts of laws in the existing legislation, which rarely indicate which previous laws, or provisions, are cancelled. As a consequence, there are significant legislative overlaps.

The Labor Law of 2000 needs significant substance review and text improvement to address key issues like end of service compensation, minimum wage requirements, compensation and vacation rights during the probation period, compensation system for injuries while on the job, equality of women employment, and others providing a sound balance between the rights of employers and employees. Foreign trade is another area that should be particularly emphasized. A Foreign Trade Act drafted by international experts, is awaiting the outcome of the Palestinian-Israeli trade negotiations and, subject to political developments, should be adopted at the earliest possible time.

Other draft laws and bills that should be considered and adopted at the earliest possible time include insurance, customs, mining and natural resources, intellectual property, competition, secured transactions and mortgage finance. It is recommended to consider legislation on leasing, microfinance and credit cooperatives.

As for Investment promotion and tax incentives, they are to be regulated in separate specific laws; The Investment Encouragement Law No. 1 of 1998 provides investors with approved investment vehicles including a tax exemption formula. Industrial Zones Law No.10 of 1998 provides investors doing business in industrial zones with procedures to ensure the proper conduct of their business and movement of goods and raw materials as well as storage. The PIEFZA was given the mandate by the Ministry of Industry under the Law No.10/1998, to develop and implement a major program of Industrial Estates and Free Zones in Palestine.

3.2.3 Financial sector

Relatively new and small by international standards, the Palestinian commercial banking sector includes 22 banks (11 national and 11 foreign, mostly Jordanian) holding US$5.0 billion in assets and US$ 4.6 billion in deposits (as of June 2005), through 133 branches and offices (as of Dec 2003).

Assets and liabilities are highly concentrated. As of February 2005, Jordanian banks held 78% of deposits, with Arab Bank and Cairo-Amman, both Jordanian and the two largest banks in Palestine, holding 60%. About 56% of these deposits with Jordanian banks were placed abroad.

National banks appeared to lend more locally, only 35% of their deposits was placed abroad.

Private sector financing represented a low 26% of deposits as of February 2005. But the disparities between banks were significant: Egyptian banks allocated 73% of their deposits to finance the private sector, national banks 49% and Jordanian banks only 19%.

Credit facilities included 56.5% in overdrafts, 42.7% in loans, 0.5% in leasing finance and 0.29% in bank acceptances and discounted bills of exchange. Direct credit facilities were 56.7% denominated in US dollars, 30.9% in Shekels and 11.6% in Jordanian Dinars.

Overdue loans amount to 20-25% of total assets, and close to 40% when only local assets are considered. Under PNA regulations, banks must make provision of 20% when loans are overdue 90 days, 50% after 180 days and 100% after 1 year.

There is no savings and loans equivalent system and current legislation does not provide for bank deposit insurance. There is a relatively small but active and successful microfinance activity, funded mainly by donors.

Economic growth in 2005 was contributed by a number of factors, including a 30 % increase in credit to the private sector that has spurred strong growth in the construction and transport sectors; and a 20 % increase in outlays by donors.

PNA emphasized the free movement of capital and profits as a key policy issue, under its financial and economic policy. This includes full capital repatriation (including profits and dividends), unrestricted movement of foreign exchange, and free transfers of foreign currency.

3.2.4 Investment survey

The investment survey shows the main findings of the fieldwork survey of the perceptions of the owners/ managers of the targeted companies as predetermined by the Study Team, concerning their perceptions and economic situation toward the proposed industrial park in the JRRV. The survey was conducted during the period of 27th May to 27th June 2007, taking into consideration the current difficulties in the period of data collection due to the crisis in the Gaza Strip and partially in the West Bank starting from the beginning of the fieldwork activities for this survey.

The aim of the survey is to observe the perceptions, views and opinions of the owners and managers of the economic institutions in the targeted markets (inside and outside Palestine) with respect to the proposed project and future investment opportunities in the area by these companies. The sample size is 106 economic establishments (48 in the West Bank, 8 in the Gaza Strip, 25 in Jordan, 20 in Israel and 5 in UAE).

It should be mentioned that the survey was implemented in a very critical situation on the ground with respect to what had happened following *Hamas* control over the Gaza Strip. The following summary reflects the situation from the economic institutions' point of view according to available statistical indicators (*PCBS monthly survey*, June 2007). Results

constructed from this survey are as follows;

The expectations of the owners/ managers of the economic establishments in the short term, i.e. after one month of the reference month (May 2007) show that 36.2% expected improvement in their production in general in the West Bank and Gaza Strip (37.0% in the West Bank and 34.3% in the Gaza Strip).

The expectations of the owners/ managers of the economic establishments in the medium term (in the next six months) 42.1% expected improvement in production in the next six months in the West Bank and Gaza Strip (44.5% in the West Bank and 36.3% in the Gaza Strip).

The data shows that surveyed companies are from the manufacturing sector(60.4%), services sector (7.5%), and agribusiness and others (32.1%). Most of companies (64.8%) are considered relatively large, as their employment capacity is greater than 20 workers and this also indicates that the capital of these companies should be also high.

48% of surveyed companies indicated that the probability of expanding the business within the next 5 years is high, while only 18.8% of companies indicated that the probability of moving their business to the proposed industrial park is high. 55% of the companies that are highly interested in investment in the industrial park are from the food processing and agri-business sector, with 20% from freight and clearance sector and the remaining from other sectors; furniture, agricultural machinery, financial investment, plastics and technologies for body contouring.

On the investment side, the results indicate no significant differences among surveyed companies with respect to the nature of obstacles that face them in approaching the industrial park. They mostly indicate the high impact of the unstable political conditions and the restrictions on movement of labor which makes the country risk so high for potential investors.

On the incentives side; most of the respondents reported that taxation incentives and registration facilitation were much recommended to attract potential investors to move or start new business in the industrial park. Part of those respondents indicate also that facilitating the movement for the employees and providing business supporting services are of significant role for the success of the industrial park. The major support business services needed by those companies were logistics and transport services and quality control and testing services.

Regarding the timing of the survey, the results may be different if the survey were implemented in a different situation that is more stable and encouraging environment for potential investors. There would be more willingness to move to the new planned industrial park if the relevant parties also could decide to launch a tangibles policies and measures to improve the movement and access to the public.

It was seen from the analysis of the answers of the respondents that they are seeking for three dimensional investment encouragement system in the proposed park, including the measures to improve the access to the area, and the measures to improve the working conditions inside the proposed park, and finally the taxation incentives, and this may need a further investigation to capture more precise suggestions in each part as they are not so precise in the current data set, because most of the respondents gave a broad (generic) recommendations.

Main conclusions:

As a result the main conclusions of the survey can be summarized as follows:

- The implementation period was not the best timing period for this type of surveys as they are very sensitive for situation and current conditions on the ground specially for political and security factors
- The respondents were not willing to report on their financial and other accounting data.
- The respondents are expecting a significant measures to be taken before approaching this industrial park in order to facilitate their registration, access, legal guarantee, etc.
- Direct financial incentives are the core of the investment package that they expect in order to approach this park
- A new round is needed to capture the best perceptions and views of the respondents in more enabling environment with more stable situation on the ground.
- The major obstacles reported by companies were the political and economic instability and the restrictions on movement and access of labor consequently
- The major support business services needed by companies were logistics and transport services and quality control and testing services consequently.

3.2.5 Free Zone

PNA has concluded free trade agreements with the EU, the European Free Trade Association (EFTA), the United States, Canada and Turkey. In addition, it has signed agreements regulating trade relations and cooperation with Russia, Jordan, Egypt, Saudi Arabia, United Arab Emirates, Yemen, Morocco, Tunisia and other Arab countries. This makes the whole Palestinian territories attractive for all kinds of investment, especially when directed for export markets with duty free access.

Palestinian traders have been asking for free zones on the borders with Jordan and Egypt since many years, but because this decision is not only in the hands of PNA, and needs Israel Authority approval, the traders' request never materialized.

Note that the food sector will be the sector which will benefit more than other sectors from the free zones once established. The food processing sector is one of the most rapidly developing sectors in the Palestinian economy. The total market for Palestinian food products is approximately $35 million per year. Recent developments in quality to meet international standards and requirements are serving to both enhancing the sector in the local market as well as to increasing the export capacities of local producers.

Encouraging local and foreign investment in the agricultural sector and developing an export market for Palestinian produce is high on the agenda of PNA. Approximately 25% of all Palestinian exports are generated by the agricultural sector. Among its major agricultural exports are fruits (72% of the cultivated area), vegetables, olives and olive oil, and cut flowers. As an example of one company who waited in vain for a long time for a free trade zone on the border with Jordan was Sinnokrot Group which established Zadona Agro-Industrial Company in early 2006, an agro-industrial company concentrating on agricultural production and marketing and producing various kinds of pickles in different shapes and tastes. The factory's facilities include building with 2000 square meters, yards with 4000 square meters, and farmland with 10000 square meters. The target markets of the factory are the local, Arab, European, and American markets. The factory employs hundreds of workers and farmers.

Palestine is in need for a number of free trade zones or export processing zones, mainly to guarantee the facilitation of transport of Palestinian exports from these zones to neighboring and international markets. If transportation of Palestinian products to neighboring countries is facilitated, one can consider that the major problem that faces our exporters today is solved. Furthermore, bureaucratic requirements should be lowered in hopes of attracting new business and foreign investments.

3.2.6 Others

It is widely recognized that the most impressive asset of the Palestinian economy is its human resources. Palestinians are relatively well-educated and have managed to sustain a strong commitment to education throughout several decades of conflict. The Palestinian labor force in particular is distinguished by a high level of education and thus has sufficient skills to explore new, knowledge-intensive industries that depend on modern technology. However, while the Palestinian population is highly educated, it is difficult to find managers with significant practical experience or workers with the requisite skills.

Despite high unemployment, wages in the West Bank are more than double wages in Jordan and over three-time Egyptian wages. Average wages in the Gaza Strip are only slightly lower. If Palestinian private sector is to grow, Palestinian entrepreneurs will have to invest and move to higher value goods that can compensate for the high cost of production.

Thus, the focus should move to higher value products towards export markets. It is important that Palestinian businesses were relying for a long time on their forced trade relation with Israeli traders, and most Palestinian products do not meet the necessary quality standards for export and few companies understand the requirements for packaging and labeling. If through this proposed industrial park, this kind of expertise would be provided to them with some facilitation services for their products to be transported without any problems, then the success rates for this park would become higher.

CHAPTER 4 INDUSTRIAL DEVELOPMENT STRATGEGY

4.1 Priority Industries

The strategic approach to industrial development initially attaches importance to strengthening of export industries. Competitive export goods will be able to compete against imported goods in the domestic market. Thus export promotion plays a role in import substitution. Export promotion of Palestinian goods needs a market strategy for their target export markets as well as a quality and product development strategy on the supply side. In such a way, the export facilitation will eventually strengthen Palestinian industry. It is expected that Palestine shall lessen its dependency on the Israeli economy for export and establish an export strategy for Palestinian industries/products towards the rest of the world, particularly Jordan, the Gulf countries and the EU. Selection of priority industries implies those having export performance or potential in Jordan, the Gulf countries and the EU. Out of the potential industries presented in chapter 2, priority industries and products are as follows:

Table 4.1.1 Priority Industries and Products

Priority industries	Products	Markets
1) Agriculture	Fresh fruit and vegetables	EU, GCC, Jordan
2) Processed foods	Meat, olive oil, frozen vegetables, herbs	Jordan, EU, GCC
3) Stone & marble	Building stone, mosaics, headstones	Jordan, EU, North/ South America
4) Pharmaceutical	Generic drugs	Jordan, N. Africa Arab League Countries, CIS
5) Metal	Office cabinets, tools, tubes, pipes, bolts	Jordan, GCC
6) Rubber & Plastic	Inner tubes, conveyer belts	Saudi Arabia UAE

Source: JICA Study Team
Remarks: GCC means the Gulf Cooperation Council

Palestine has enjoyed a stable export of fresh fruit & vegetables and processed foods to Jordan, the Gulf countries and the EU over the last five years. Whilst these export markets are highly competitive, Palestine will need to focus on high value-added commodities as the primary strategy. The stone and marble industry has comparative advantages in terms of available resources and skilled labor, which has resulted in an increase of export of stone products. The pharmaceutical industry will need new product segments because of fierce competition in the export market of generic drugs. Metal, rubber and plastic would be promising export products to Jordan and the Gulf countries if the quality is enhanced as well as assured.

The following table shows export and promotion strategies for priority industries.

Table 4.1.2 Export Strategy and Promotion Initiatives for Priority Industries

Priority industries	Export strategy	Promotion Initiatives
1) Agriculture	High price or value-added products	- EurepGap certificate - Distribution & logistics center (sorting/packaging) - Association for export promotion - Agricultural Standard for primary commodities
2) Processed foods	- Products with high quality (i.e. extra virgin olive oil) - *Halal* products matching Arab foods requirements - Organic foods aiming at potential markets of healthy foods	- Public support for experimental laboratories for *Halal* or organic foods - Product development in quality and packaging
3) Stone & marble	- Products with unique and custom-made design	- Vocational training for stone processing - Incentives to keep skilled Labor
4) Pharmaceutical	- Nutrient supplements	- A joint venture company for R & D
5) Metal Rubber/Plastics	- Strengthening vertical linkages with Jordanian/GCC companies	- Certification of PS mark to enter Arab market as quality assured products

Source: JICA Study Team

(1) Agriculture

Palestine needs a comprehensive strategy for exporting high value-added primary products to foreign markets. An important aspect is the identification of such products (market approach) first, then strengthening of supply conditions. At present, primary commodities such as cherry tomatoes, sweet pepper and dates exported for high prices in the EU market are the targets of high value-added commodities. These commodities need certified agricultural standards to assure quality and post-harvesting facilities for sorting, cooling and storage to keep high quality and freshness. PNA (*the Ministry of Agriculture*) is recommended to urgently introduce such standards and prepare a plan for such facilities for high value-added commodities. There is no association specializing in export of fresh fruit and vegetables. Jordan has already established *the Jordan Exporters and Producers Association for Fruit and Vegetables* (JEPA) where about 140 farmers/exporters are registered as members. The tasks of JEPA are very comprehensive, including periodical information collection about the EU market, consulting services for the EurepGap certificate and dissemination of market information to member companies. A similar association in Palestine would contribute to the export of high value-added commodities.

(2) Processed Foods

Two approaches could be considered to strengthen the processed food industry. One is to improve the quality of conventional products and packaging materials. However, the industry, which is composed of mainly small firms, is not financially strong enough to improve its processing and packaging technology.

Instead of conventional products, the industry should explore new product segments such as *halal* or organic foods that are increasing in demand in the Gulf and EU countries. Palestine, endowed with various natural resources, would best fit the production of organic and less processed products. To do so, there would need to be public support for establishing an experimental laboratory where safe and healthy processed foods are to be developed in conformity with requirements and regulations of the Gulf countries and EU.

(3) Stone & Marble

Palestine has comparative advantages for processed stone products in terms of design and quality. Products are building stones and slabs as low added value products and cut tiles, headstones, decorative and ornamental products, kitchen units and artistic mosaics from marble as high added value products. High added value products are generally heterogeneous in design and size based on buyer orders, which implicates the necessity of highly skilled labor, which is the key factor for stable export of finished stone products. In order to keep the industry competitive, there needs to be vocational training, especially for the young, in the fields of artistic design, stone cutting and finishing. Moreover there would need to be an incentive, such as an honorary certificate for experienced and skilled craftsmen, in order for them to produce higher quality products and contribute to the human resource development as instructors.

(4) Pharmaceutical

Palestinian pharmaceutical companies are primarily engaged in the generic products and focus on exporting to Eastern Europe and Arab countries. The firms benefit from an available skilled labor and a wage structure that is competitive among peer countries. However, the lack of niche products put Palestinian firms in strong competition with their peers from other countries. To cope with such competition, it is recommended that these firms develop new drug regimens, natural products, and nutrient supplements gaining substantial interest worldwide. It is also advisable to establish an industrial-academic cooperation that enhances the use of university and industry resources for the benefit of R&D in Palestine.

(5) Metal/Rubber & Plastics

Products produced in the metal, rubber and plastic industries are parts and tools using basic technologies such as moulding, casting, punching, welding, cutting and machining. Development of basic technologies will strengthen forward linkages with machinery and assembly makers. In fact, the metal industry has been successful in exporting metal parts to Jordan. Despite Israeli dominance in the export market for rubber and plastic products, these

industries would make the best use of their high level of skills/technology by exporting products to the rest of the world, particularly Jordan and the Gulf countries. First of all, it is necessary for Palestinian products to be certified by PSI (PS mark). With the certification of the PS mark, their products are entitled to enter the Arab market where the PS mark is accepted as a quality standard. The next step should be obtaining ISO certification and, to a limited extent, the CE mark, to enter European and USA markets where the PS mark is not enough.

4.2 Investment Promotion

The issues and challenges for the investment environment presented in chapter 3 are wide and broadly classified into the categories below:

- Legal issues
- Financial incentives
- Financial sector
- Impediments to investment promotion
- Free zone
- Institutional issues.

This subsection focuses on the rest of the issues that should be considered for establishing an industrial development strategy for the industrial park, and discusses actions and ideas proposed for improving those issues. In particular, impediments to investors, free movement of goods and people and high transportation cost are worth consideration. An institutional issue has also to be taken into consideration. There currently exist two institutions for investment promotion activities: PIPA and PIEFZA. PIPA is in charge of individual investors while PIEFZA is in charge of promotion for industrial estates. There is little coordination between the two institutions about investment promotion. PNA is recommended to review the existing regime for investment promotion.

(1) Investment Guarantee

Political instability is highlighted as the most important obstacle in the investment survey of the Study. The result is similar to the World Bank/PCBS Enterprise Survey conducted in 2006. Palestine has already gained the status of receiving guarantees from *the Multilateral Investment Guarantee Agency* (MIGA) in 1997. MIGA provides eligible foreign investors in Palestine with guarantees against the political risk. However, there is scope to improve the current investment guarantee scheme in the following areas:

- Increase of coverage, currently at US$3 - 5 million per project
- Guarantees to domestic investors.

For political insurance beyond US$5 million, MIGA assists investors in obtaining co-insurance in order to increase the insurance coverage, but a co-insurance partner will be a private

insurance company and as such will find difficulty in covering the political risk. A feasible option remaining would be to increase the MIGA coverage to above US$5 million. Of more serious concern is that there are no investment guarantees for domestic investors. Article 8 of the Law on the Encouragement of Investment in Palestine in 1998 stipulates that there shall be no expropriation of an investment or part, as general guarantees, but this article is not valid for losses caused by political instability. PNA is recommended to review the current guarantees system.

(2) Free Movement of Goods and People

The issue on free movement is identified as one of the most serious concerns in the investment survey. Preferential treatment on free movement of goods and investors is traced back to the agreement between Palestine and Israel at the Minister level in 1999, which allows goods and investors from and to industrial estates to be freely moved without any check at crossing points. However, this treatment was suspended due to security reasons after the Second Intifada in 2000. Currently investors at the Gaza Industrial Estate are allowed to carry identification cards (Business Man Card) with which they can freely move to anywhere inside the West Bank and Gaza, and Israel.

It is hoped that free movement of cargoes from and to the industrial estates should be reactivated in the near future. The issue is closely related to the security concern of Israel. One option to solve this issue would be employment of security companies belonging to a third party or country. A similar method is identified at the Karni crossing point where a European company monitors passage of cargo. Turkey has shown its willingness to advance into industrial estates in Palestine primarily because it is interested in the preferential treatment (i.e. no quota) given to Palestine in trade agreements with the USA, EFTA and the Arab League of Nations. Turkey dispatched its delegation to Israel and discussed the issue of employment of its security company provided that it brings private investors to industrial estates in Palestine. This issue is now under examination by the Israeli side. This example might be worthwhile for consideration.

(3) Free Zone

The concept of a free zone is stipulated in the PIEFZA law, but it has never been realized so far. As seen in the rest of the world, free zones offering trade and logistics functions are mostly located at borders or port areas. Jericho, which is adjacent to the Allenby Bridge, the crossing point to Jordan, would be an ideal place to create a free zone where goods and services are freely traded with the rest of the world. Nevertheless, a free zone in Palestine conflicts with the current quasi-custom system where Israel virtually controls Palestine's imports and exports. There have been no policy level discussions nor agreements on the free zone between Palestine and Israel. The issue of customs duty exemption is not difficult to negotiate once both sides agree to create a free zone.

An international free zone might be worthy of consideration. The legislative status of land for an international free zone should be neutral, which would be a different land entitlement from the current area jurisdiction. Perhaps such land could be jointly controlled by a committee organized by Palestine and Israel. Legislation and regulations applied to a zone are also jointly determined. For a better perception of such a joint free zone, major donors could be invited to finance the construction of the zone.

(4) Transportation

High transportation cost is indicated as the major weakness affecting price competitiveness in the SWOT analysis of potential products. According to a few freight companies, freight cost from the West Bank to Ashdod port is more than the marine transportation cost from Ashdod to the UK. High inland transportation cost is caused by many factors, but primarily by the back-to-back system. This system regulates the type of trucks for transshipment according to the kind of cargo. A bulky cargo requires an open trailer for transshipment at the Allenby Bridge, which pushes up the freight cost. Although the system is a must under the current strict security policy of Israel, alternative approaches to the system are worthy of consideration.

One is the installation of X-ray equipment scanning the inside of container boxes at crossing points. This method is very costly and might be applicable to international crossing points only. Another is, for instance, the use of Jordanian empty trucks for outgoing cargo from the agro-industrial park. The same truck can pass through the Allenby Bridge without transshipment in return. The relaxation of passage control on outbound cargoes should be taken into consideration.

(5) Establishment of Investment Promotion Unit

Investment promotion covers a wide range of information consisting of land, guarantees, incentives, infrastructure, financial services, industrial estates, identification of a domestic partner for joint ventures and so on. Respective information is administered by different agencies so it is difficult for investors to access and get the right information they require. The lack of transparency and the bureaucracy of PNA make it even more difficult for the private sector to access necessary information.

It is recommended that PNA should create an “Investment Promotion Unit” attached to the Ministry of National Economy. The Unit should preferably be a special body directly under the authority of the Minister and with the power to order other agencies for collection of information relating to investment promotion. The inclusion of private consultants in the Unit would strengthen its capacity in the fields of hands-on experience in investment. The participation of private sector business membership organizations, such as PFI, should be welcome. It is recommended that the Unit create target country desks in order to consult with investors from respective countries. Consulting fees would be levied on investors calling the Unit so that such revenues can be deposited for its activities.

4.3 Mission of the Agro-Industrial Park

The agro-industrial park could have the following component missions:

- Promotion of priority industries and exploitation of new markets
- Investment promotion
- Regional cooperation based on the initiative "*corridor for peace and prosperity*".

Mission 1

The term "park" implies multiple functions comprising research/laboratory, training facility and pilot farm facility for new products. The Park is intended to place an emphasis on humanitarian assistance and product development. The Park primarily accommodates priority industries that develop/produce new/high value-added products exporting to regional and world markets.

The Park is also intended to facilitate business transactions between Palestine and foreign countries by providing trade and logistics services functions. The Park itself is a market place and encourages the private sector to expand business opportunities outside Palestine.

Mission 2

The Park will be a flagship project to attract investors under a new investment environment. PIEFZA as the executing agency is liable for periodical monitoring to find out challenges for its operation. Findings will be reflected as feedback in the operation of the park in order to further improve the investment environment.

Mission 3

The Park will be designed to trigger facilitation of regional cooperation in the following areas:

- site selection and management
- business cooperation
- product development
- human resources development and training
- free movement of goods and people
- relaxation of passage control on cargo at international crossing points.

Mission 3 is the most valuable and important outcome of the Park. The success of the Park as a regional cooperation project will lead to other industrial park projects, thus contributing to industrial development in Palestine.

CHAPTER 5 INDUSTRIAL PARK DEVELOPMENT

5.1 Basic Principles for Industrial Park Development

5.1.1 Introduction

For this *Pre-feasibility Study*, the first phase of the whole feasibility study which is scheduled to be completed by August 2008, a preliminary examination and planning for the Industrial Park Development was made with an assumption that a suitable land meeting the basic criteria as given below are to be secured[1]. The candidate site has been presumed to be located in the southern or eastern part of the Jericho area, which is to be agreed upon with certain documentation between PNA and Israel at an early day possible.

<Basic Criteria for Site Selection>

i) The site is to be selected in the southern or eastern area of Jericho City.

ii) The land has an area of around 50 ha for a short to medium term requirement, while the area could be extended up to 100 ha or more on a long term basis.

iii) No conflict with the present land use for a new development: No permanent use for agriculture, no valuable building/facility or no conspicuous obstacles against development.

iv) Easy access to a major artery: Accessible in a distance of less than 1 km from the site.

v) Basic infrastructure services, i.e. water supply, power supply, telecommunication, waste collection, etc. are technically attainable/securable.

In the following sections of 5.2 through 5.6, the basic concept, required functions, land use plan (conceptual), infrastructure development, expected project impact, and implementation issues (schedule and O&M framework) are preliminarily examined[2]. It should be noted that a further detailed engineering study should be undertaken in the subsequent Phase II of the feasibility study as soon as the site is determined and agreement is made for continuation.

As the borderless global economy requires prompt decision-making and quick actions particularly for the private businesses, the Industrial Park under consideration here should be open within five years to come at the latest, even starting with a partial opening. Then it could be expanded later to the full development scale say within tenth years from now.

[1] There have been several times of coordination meetings for the site selection between PNA and Israel, including the First Technical Level Meeting of the Four-Party Consultative Unit held on 28 June 2007. However, the JICA Study Team understands that no clear agreement has been made so far, while having further bilateral discussion focusing on that the site would be designated basically in the southern or eastern part of the Jericho area.

[2] Technical assessment on the candidate sites and environmental and social consideration are also studied and incorporated as *Technical Note*s at the end of Chapter 5.

5.1.2 Basic Principles for Development Planning

In development planning, in general, three principal questions must be addressed first. They are:

i) How large a land area is required for the development?
ii) What is the time frame for the development? and,
iii) Who will develop it and how?

The first question relates to development size (the *Scale*), the second addresses the schedule or stage (the *Stage*), and the third requires an appropriate role-sharing among the stakeholders (the *Actors*). The *Study* considers these principal issues for the development planning as follows.

(1) Scale of Development

One of the key determinants of the development scale of the Industrial Park will be the number of enterprises showing their interest in moving into the Park with factory/office.

As this Study is on a pre-feasibility level, an investment demand survey that has been conducted on potential enterprises from PNA and surrounding countries is a preliminary one. The result showed that about 20% of the total (21 firms of 104 samples surveyed, as valid respondents) gave positive response (highly probable[3]) for moving their activities into the new industrial park somewhere in the Jericho area. Among the responses from the enterprises in the West Bank, 31% (15 of 48) is positive in investment in the industrial estate. This would translate to that about 250 out of the 800 enterprises[4] in the West Bank may have positive positions for moving/investing in the Industrial Park in the Jericho area.

It may be too early to say, however, that 250 enterprises will be regarded as the target investors, because this investment demand survey was conducted at a preliminary stage without detail information about the site, and thus may give an optimistic estimation of the potential demand. On that premise, the number of target investors (250 enterprises) should be reasonably discounted in setting a target to be on the safe side.

There is no theoretical way to estimate this kind of target number, while the JICA Study Team could indicate from the past similar experiences in Japan and other Asian countries, that 10 to 25% of the enterprises who signaled their initial intentions to move into the project (i.e. industrial estate) could be regarded as substantial target enterprises in the actual investment stage. Following this indication, approximately 40 enterprises in the West Bank (250

[3] Four-grade assessment of "Highly probable", "Moderate probable", "Low probable", "Improbable".
[4] Data source is "*Establishment Census,2004* " by PCBS in 2005, in which number of establishments of manufacturing sector is estimated at 703, while that of transport, storage and communication sector is 97. 800 in the main text above is the total number of these two sectors.

enterprises x 10%- 25% = 25- 54 enterprises) could be a reasonable number of the target enterprises. Plus, assuming some small numbers of enterprises from outside the West Bank would also move to the Park, 50 enterprises in total shall be set as the target number at this stage.

The standard plot area per factory/office is estimated to be 0.5 ha/lot approximately on average in reference to the similar planning cases in the West Bank[5]. This average area allows more active enterprises for a few large-sized plots. Furthermore, considering the proportion of net plot area to common use area[6], approximately 50 ha of land, in gross total, may be required to accommodate 50 enterprises.

While the industrial park is intended as an export processing zone or a free trade zone, being small sized industrial park of 20 - 30 ha would be a disadvantage. The reasons are; 1) being small sized estate would not be profitable enough for developers to recover on-site infrastructure facility, 2) little industrial accumulation or interaction effect could be expected, and 3) being small-size itself would make the profile in the international market small, making the sales promotion difficult.

There were a number of large-sized industrial estate developments in the 1980s through 1990s in Asian countries such as Thailand, Indonesia and Malaysia, which followed the development unit of about 100 ha. Most of these industrial estates in Asia have been successfully implemented and retain high occupancy up to the present date.

On the other hand, small-sized developments at a scale not larger than 20 to 30 ha (e.g. those in South and Latin America) seldom materialized for the reason they were not attractive to the international investors in the international estate market.

Given these lessons learned, it is recommended for this Industrial Park development to start with developing 50 ha on a short term basis in 5 years, as the first phase. The subsequent second phase would follow to expand the estate for sale after obtaining lessons learned from the first phase. Eventually the industrial park development would become 100 ha in total, consisting of the first phase of 50 ha and the second phase of 50 ha.

[5] Jenin Industrial Estate (JIE): 0.37 ha/lot, Nablus Industrial Estate (NIE): 0.14 ha/lot.
[6] From the similar cases, proportion of the plot area to common area is 0.6 to 0.4 (JIE) and 0.54 to 0.46 (NIE).

(2) Stage-wise Development

An initial land-development expenditure (not including land expropriation cost) has been preliminarily estimated for the first phase of 50 ha development as 40 million US$ (50 ha x US$ 80[7]/m^2). From the viewpoints of funding capacity and investment risks management, it would not be easy for a developer to invest the required fund all at once. It is, therefore, considered here to divide the overall development into two or three stages of investment.

Staged development/ investment would bring about several merits in addition to early stabilization of the project cash flow. They are:

- Early completion of sales to about 20 enterprises shall cause a sort of "pump-priming effect", which could contribute to pushing follow-on enterprises for early decision making.
- Having too high a target of enterprises in a short-term stage may put the developer in a situation where the target is not easily attainable during the target period, as the sales and marketing resources would disperse among the many promotion targets. On the contrary, small and manageable number of target enterprises would enable the sales and marketing resources to concentrate on the limited targets, helping them to accomplish the target.

Therefore, the first phase development of 50 ha is recommended to be divided into two stages; 30 ha for the first stage development and 20 ha for the second stage are recommendable for the staged development and sales promotion.

(3) Development Actors

As mutually understood in *the First Technical Level Meeting of the Four-Party Consultative Unit* held on 28th June 2007, the main objectives of this Industrial Park are "promotion and diversification of export of Palestine" and "promotion and creation of employment opportunities in Palestine", under the Japanese initiative of "*Corridor for peace and prosperity*". On a condition that this project is formulated in such a way as to fill these objectives, it is requested for the public sector (national and local governments) to extend necessary and sufficient supporting facilitations for the Industrial park, institutional establishment/improvement program and/or production/processing technology improvement program, so that the expected effect/impact would be materialized. Assistance from international aid organization for the public sector in this regard would be necessary and essential in making this project succeed.

[7] Land preparation cost (including necessary on-site infrastructure development cost but excluding land expropriation cost) is estimated to be approximately 80 USD per m^2 on a gross area basis, in accordance with the following way of calculation from the similar cases of planning. 58 USD per m^2 (JIE, 1998 price basis) ~ 69 USD per m^2 (NIE, 1998 price basis) is multiplied by 1.21 (adjustment parameter of CPI between 1998 and 2006), which turns out to be 70 ~ 83 USD per m^2.

In order for the agro-industrial park to be sustainable, it is advisable that the construction, sales marketing and O&M of the Industrial Park would be entrusted to the private sector under a certain concession agreement. This issue will have to be considered in detail depending on the business capacity of potential developers including marketing and financing.

From the national economic viewpoint, however, the public sector is expected to provide physical supports for off-site public facilities. In concrete, off-site infrastructure facilities such as an access road, a water supply facility, a waste water collection system, a solid waste collection system, etc., will need to be financed and constructed by the public sector in parallel with the on-site developments of the Park. This may be the area where international assistance will be necessary and essential.

In addition, of course, the Industrial Park has to be financially feasible with a sound cash flow during its project life. It is expected for a developer to make the Park competitive in terms of the physical environment and services that it would provide.

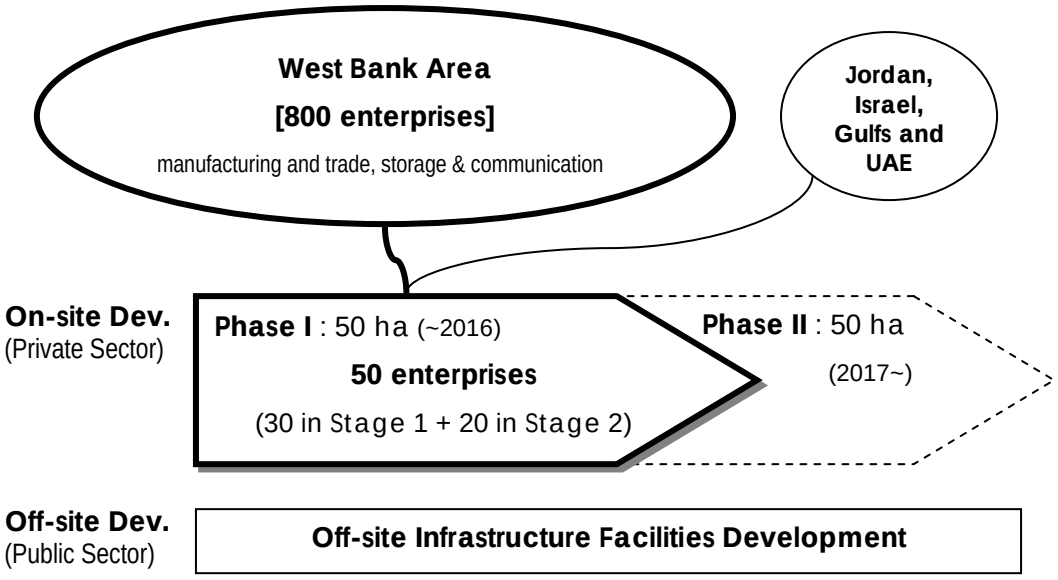


Figure 5.1.1 Principles for Scale, Stage and Actors of Development

5.2 Concept, Functions and Areas of the Industrial Park

5.2.1 Overall Concept

As discussed in the previous Chapters, the potential target industries are identified to be *Agriculture*, *Agro-industries*, *Food Processing* and *Pharmaceutical.* These industries are all related to the human well-being in consideration of their nature of products.

From this point of view, the Study proposes to develop the Industrial Park with an overall concept of creating an accumulation of industries related to the human well-being. Under this thematic concept, it is anticipated a variety of productive activities would be developed to be a new industrial core in Palestine.

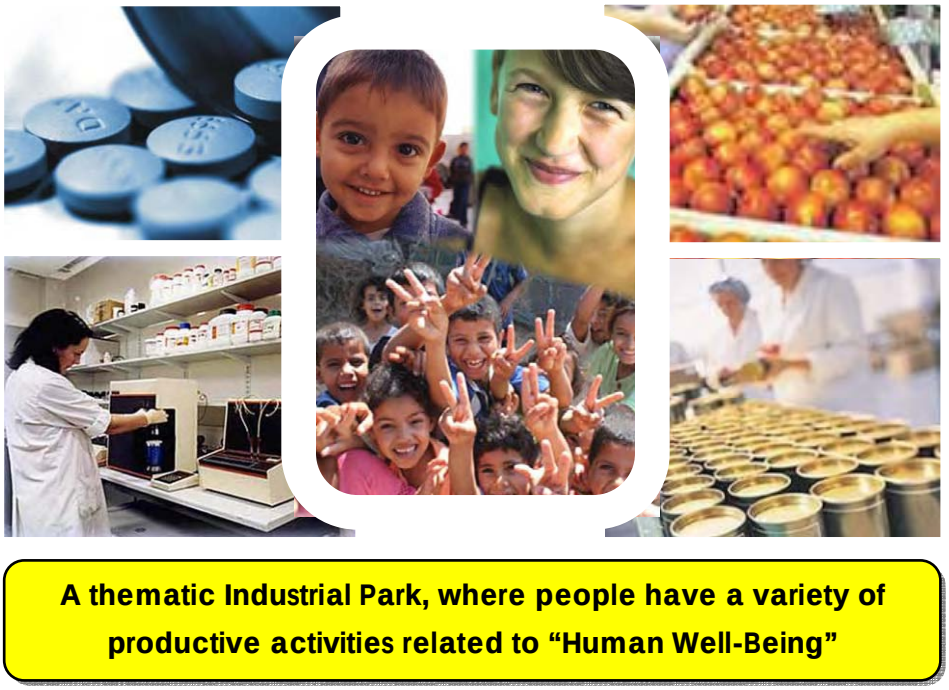


Figure 5.2.1 A Visual Image of Overall Concept

Having a thematic concept could bring about several merits to the estate business/marketing, which would promote estate sales. They are:

- To help integrated designing/planning of the Park, so that attractive environment for the tenants/residents could be created,
- To enhance appeal to investors as well as potential tenants/residents, thereby to strengthen competitiveness in the estate market, and
- To generate an industrial accumulation effect among the enterprises/factories in the same context of activities.

5.2.2 Functions

Under the overall concept "*A thematic Industrial Park, where people have a variety of productive activities related to Human Well-Being*", four major functions are proposed to be provided in the Industrial Park. They are i) *Production and Shipping*, ii) *Research and Development*, iii) *Business and Marketing*, and iv) *Life and Leisure*.

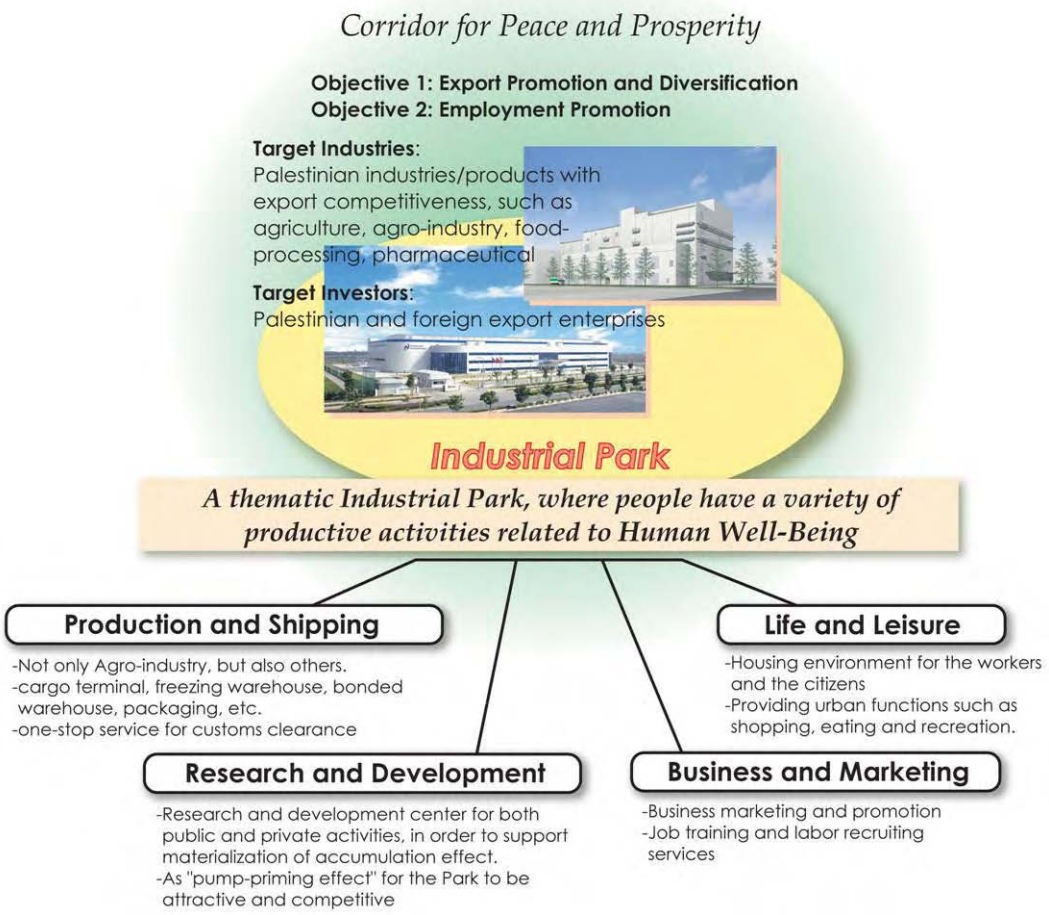


Figure 5.2.2 Conceptual Diagram of the Industrial Park

These functions[8] have been identified through the investment demand survey and heard in the private sector meetings, in order to make the Industrial Park more attractive to the investors/industries.

Production and Shipping will consist of factories/offices (not only agro-industry but also other industries), cargo terminal, freezing warehouses, bonded warehouse and packaging facilities, and one-stop service for custom clearance.

[8] These four functions are re-organized and improved from the original ideas, namely "*Manufacturing*", "*Logistics*", "*Trade and Commerce*" and "*Supporting Services*", presented by JICA at *the First Technical Level Meeting of the Four-Party Consultative Unit* held at Panorama Complex in Jordan on 27th June, 2007.

Research and Development will provide the public and private sectors with exclusive land, where their research and development facilities would be established. This function would be a core representing the entire Industrial Park and expected to contribute to enhancing attractiveness to the potential investors/factories.

Business and Marketing will provide the factories/enterprises with a variety of services, such as trade arrangement, marketing support, transportation arrangement, job training, labor recruiting services, etc.

Life and Leisure provides appropriate housing environment and various services for urban life needs such as shopping, eating and leisure to the managers and the new citizen. As the overall concept of the Industrial Park is *Human Well-being*, the Industrial Park needs to be environmentally friendly. The environment in this context refers both to the natural and social environment, so that the Park is requested to pay enough attention, for instance, to waste water treatment as well as solid waste management not only within the site but also in the surrounding area. For this purpose, donor assistance might be considered for such areas if deemed necessary and appropriate.

Assuming the location of the Industrial Park would be designated somewhere in the vicinity of the Jericho area, these functions must be carefully considered to be planned and developed so as to create a harmonization with the city's future development direction.

5.2.3 Areas

Following the four major functions explained above, six specific areas are proposed to be laid out in the Park. They are *Production Area*, *Logistics Area*, *Research and Development* (*R&D*) *Area*, *Business and Commercial Area*, *Housing Area, and Green Park and Greenbelt*.

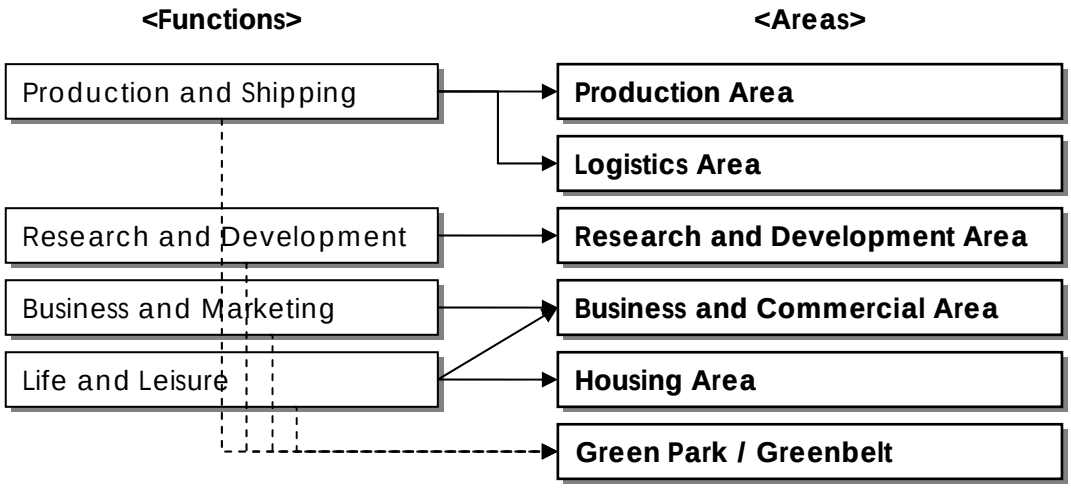


Figure 5.2.3 Four Functions and Six Areas

Characteristics of the Area are as described below.

(1) Production Area

Around 50 factories and enterprises would be accommodated in the Phase I of the total development, where a new core of productive activities mainly related to food and health could be materialized.

Building design as well as the exterior landscape shall be regulated by means of introducing a building and landscape design code in order not to disturb existing living environment in the surroundings.

(2) Logistics Area

A modern logistics center shall be developed adjacent to the *Production Area*. Such facilities as cargo terminal, freezing warehouse (cold storage), bonded warehouse, packaging center are planned to be operated for the convenience of the factories/enterprises. In addition, one-stop service for custom clearance would be provided even to the outside traders.

(3) R&D Area

Advanced research and development facilities in relation to "*Human Well-Being*" would be established by the public/private sector. This area shall support the materialization of industrial accumulation effect in the Park, which might become an advantage to enrich attractiveness to the factories/enterprises, as a sort of "pump-priming effect" for the successful development of the Project.

(4) Business and Commercial Area

Necessary business supporting services such as trade agent, marketing, transportation arrangement, job training, labor recruiting, etc. would be provided to the factories/enterprises by various private companies.

Since the probable project site is situated close to the Jericho area, shopping, eating and recreation functions are also to be provided not only to the workers of the Park, but also to the citizen.

(5) Housing Area

With an appropriate spatial zoning, keeping enough distance from *Production Area* and *Logistics Area*, a large-sized *Housing Area* is planned to be developed in a long term schedule, on the development unit of 1,000 houses. This housing area would accommodate not only employees of the factories/enterprises, but also future population of the Jericho area[9].

(6) Green Park / Greenbelt

Following the overall concept, this Industrial Park shall pay enough attention to the green environment, which may bring about relaxation feeling and mental health to the people to work/live in. Common green open space (park) and green belt along the road must be arranged sufficiently, so as the Park to be an attractive real estate in terms of green environment.

[9] The southern part of Jericho city is designated as a sort of reserved land for the future development, in *the Jericho Regional Development Study Project in Palestine* (JICA, 2006), especially for the purpose to develop residential zone for accommodating future population increase in the area.

5.3 Land Use Plan (*preliminary*)

5.3.1 Land Use Master Plan

As stated in 5.1.1, the site selection has not yet been concluded, but is still under the bilateral discussion between Palestine and Israel, while it is supposed to be designated somewhere in the southern border area of Jericho city[10]. Given this situation, the JICA Study Team has prepared the land use plan as a preliminary schematic plan, assuming two different types of locations in accessibility to the existing arterial road, i.e. a) directly connecting the existing arterial road, or b) no direct connection to the existing arterial road. In each case, "four functions and six areas" are laid out under the planning premises below:

- Total area of 100 ha would be developed according to the following schedule;
  - Phase I : Stage 1 (30 ha, ~2013) …*Production, Logistics, B&C, R&D, Green Park*
  - Phase I : Stage 2 (20 ha, ~2016) …*Production*
  - Phase II : Remaining 50 ha after 2017 …*Production, Housing*
- *Production Area*, *Logistics Area, Business & Commercial Area*, *Research & Development Area* should be developed from the earliest stage (as shown above) so as to strategically appeal attractiveness of the Industrial park to the estate market.
- A separate access road connecting to the existing arterial road should be constructed for smooth industrial transportation, so as not to disturb the daily transportation of the citizen.
- Business & Commercial Area and Research & Development Area are laid out in appropriate locations in order to enhance urban service to the existing citizen.
- *Production Area*/*Logistics Area* and *Housing Area* should be separated by green buffer zone (*park/greenbelt*), for the purpose of keeping the living environment comfortable.

Figure 5.3.1 schematically illustrates the layout patterns to meet the premises by a) and b).

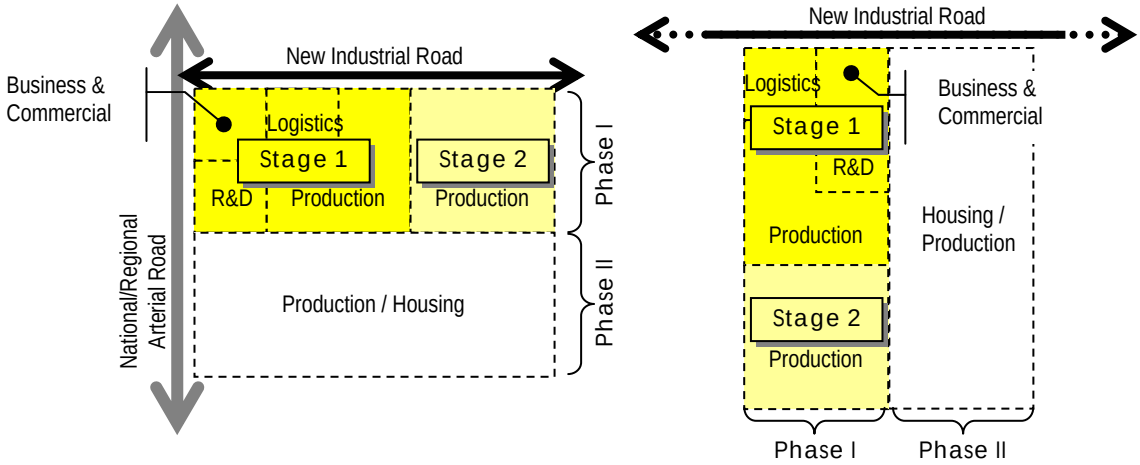


Figure 5.3.1 Area Layout Patterns

[10] See Technical Note I: Candidate Sites Assessment

In case of a) *direct connection with arterial road*, it is recommendable for Stage 1 of Phase I to start the development by locating *Business & Commercial Area* and *R&D Area* at the corner, laying out along the arterial road so as to enhance functional linkages with the existing city area. While, *Logistics Area* and *Production Area* should be laid out along the internal road (recommended not to directly face the existing arterial road to reduce over-mixture of industrial transportation and citizen's daily traffic) behind *Business & Commercial Area* and *R&D Area*. Then, Stage 2 of Phase I would follow expanding mainly *Production Area* along the industrial road. And Phase II would follow in the future for *Production Area* as well as *Housing Area*. Figure 5.3.2 (1) is a conceptual land use plan.

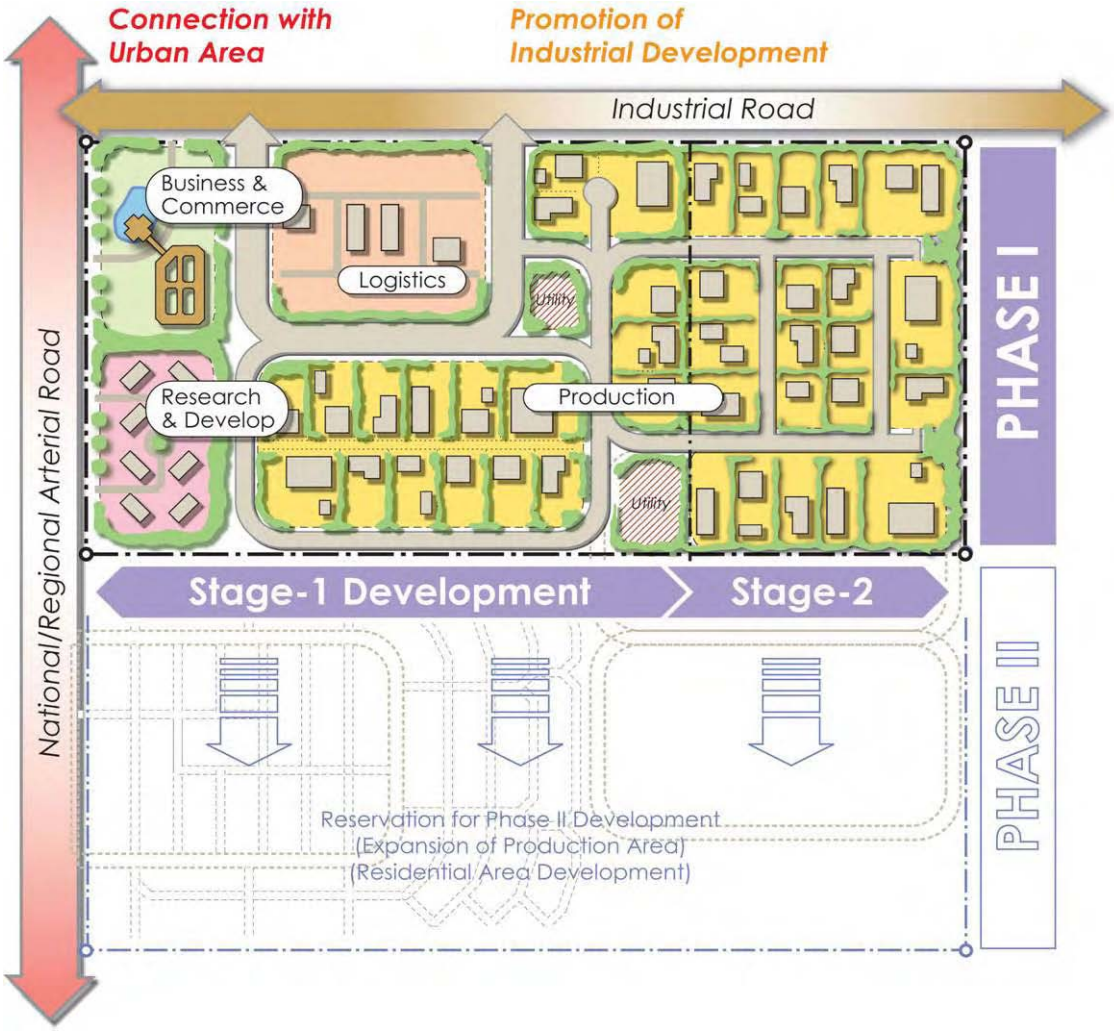


Figure 5.3.2 (1) Conceptual Land Use Plan [*direct connection to the arterial road*]

Likewise, in case of b) *no direct connection with arterial road*, Stage 1 of Phase I would start with having *Business & Commercial Area* and *Logistics Area* along the industrial road (bypass), while *Production Area* is located behind. *R&D Area* is recommended to be located inside on the side to the Phase II development area. Figure 5.3.2 (2) is a conceptual land use plan.

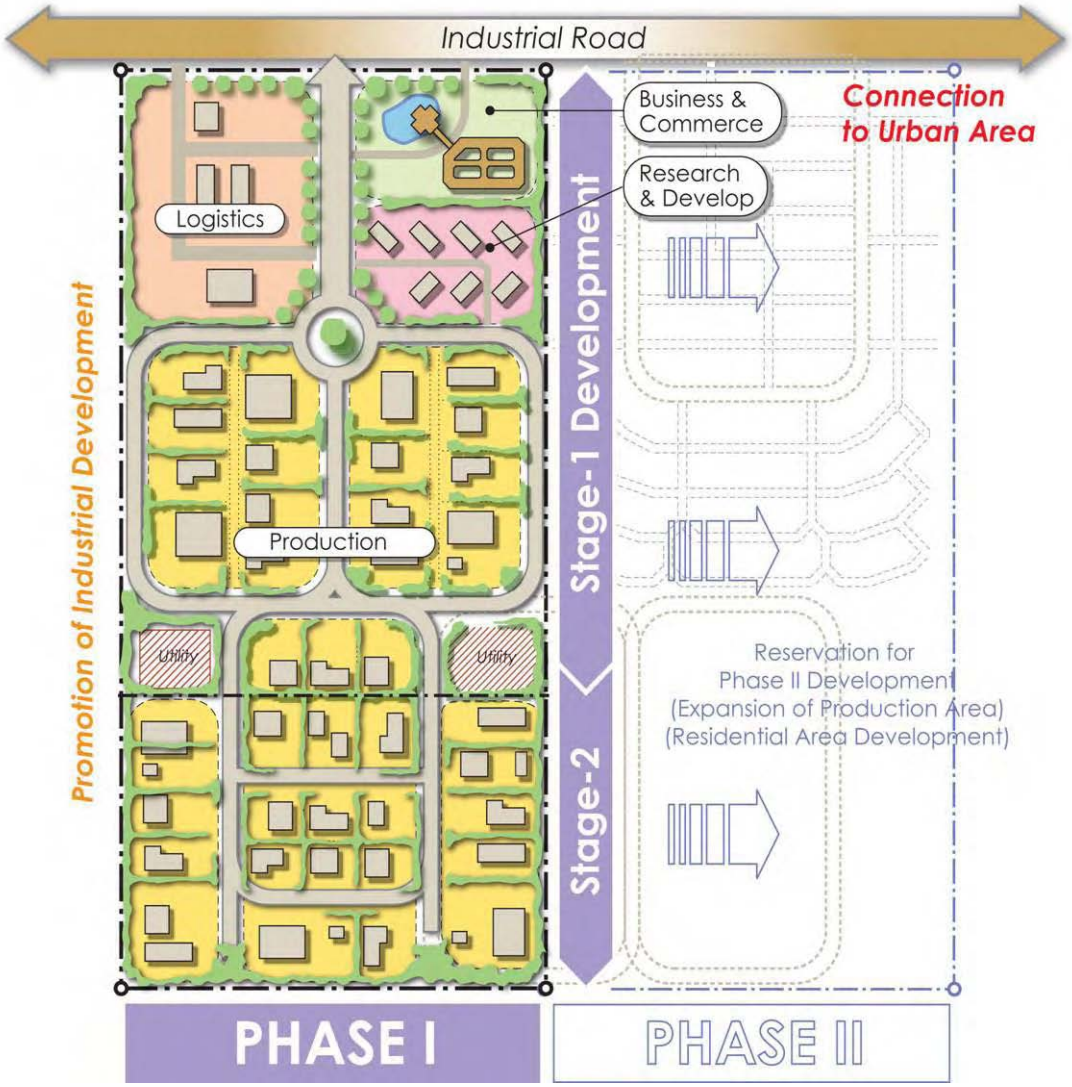


Figure 5.3.2 (2) Conceptual Land Use Plan [*no direct connection to the arterial road*]

It is noted again that these two land use plans have been prepared as preliminary schematic plans for land use in the pre-site selection stage. Therefore there shall be a variety of practical engineering considerations and constraints that may arise in the course of the planning stage after the site is designated. Some of the issues that may arise include the land jurisdiction issue, namely Area A, B and C. As for the engineering issues, general studies has been made in this Study to preliminarily identify constraints/difficulties for the Park development, assuming the site would be situated somewhere in the southern part of Jericho city. The results are described in the following part of this Chapter 5.

Meanwhile, with regard to the land jurisdiction issues, the Study has not made detailed study in land use, since it would fully depend on the location, shape and area of the site. These issues must be further contemplated also in the following stage of the Study.

5.3.2 On-site Infrastructure Development

The land use plans illustrated in 5.3.2 are schematic/conceptual and cost estimation and what infrastructure facilities are necessary for the Industrial Park would need more detailed planning. It is possible, however, to qualitatively consider engineering requirements (design parameters) for the on-site infrastructure facilities even in the preliminary stage. Facility requirements have been derived from the other similar cases in the West Bank in combination with the previous experiences of the JICA Study Team.

(1) Road

It is proposed to design the on-site major road in accordance with the least technical criteria as illustrated below.

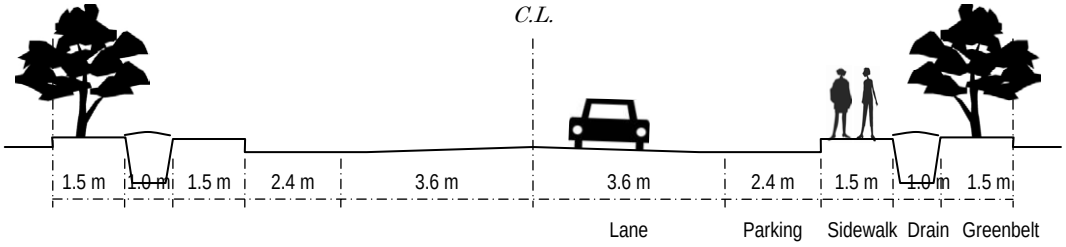


Figure 5.3.3 Typical Road Section (proposed)

Two lanes for vehicular traffic with parking lanes at both sides, sidewalks, drains and greenbelts are to be appropriately arranged in the total width of 20 m. Since the Industrial Park is not only for factory/industry use, but including other variation of people's activities, it is recommended to enrich comfortable environment for pedestrian as much as possible. Even minor road (secondary road) should basically follow the concept of pedestrian-friendly road while adjusting the widths of sidewalks, drain and greenbelt.

This is only a preliminary design criterion at this moment before technically considering the traffic volume and the design speed (usually 40 km/h is chosen) in accordance with the on-site road network in the actual site conditions, thus more specific study/discussion will be necessary in the following phase of the Study, including possibility to build in underground conduit for cable installation (electricity and telephone).

(2) Water Supply

The water demand of factory/enterprises varies according to the characteristics of the products, the way of processing, etc. For instance, food and average industry consumes sizable amount of water, while warehouse requires little water. Suppose the Park of 25 ha (net area of Phase I)

would accommodate 50 factories/industries, approximately 1,200 m^3/day or 0.45 MCM/year is estimated to be required[11].

Currently, the main water supply source in the Jericho area is Ein-El Sultan spring with its capacity of 650 m^3/hour or 15,600 m^3/day, which is barely balanced with the total domestic water demand in the area (see 5.4.2 in detail). Given this situation, another water source needs to be developed to suffice water requirement of the Industrial Park in parallel with the land preparation.

Therefore, the Study shall recommend to have a detailed survey on *Wadi Qilt*, located five to six kilometers to the west from the southern part of Jericho city, as one of the most probable water source for the Industrial Park, of which the potential capacity is estimated to be 759 m^3/hour or some 18,000 m^3/day but no detailed data are available on actual consumption for agricultural use in the surrounding area. If ten percent of the total capacity (76 m^3/hour) is saved from the possible excessive agriculture use, it would be enough to cover the water demand for Phase I of the Park.

Further technical specifications such as water pressure, pipeline network and material would be studied in the following phase of the Study, after designating the site.

(3) Waste Water Treatment

Waste water quantity could be estimated to be roughly 80 % of the total industrial water consumption. As the industrial demand for Phase I is estimated to be 1,200 m^3/day above, the waste water volume is calculated to be approximately 1,000 m^3/day. This should be firstly treated by individual factories so that the effluent quality could meet the requirements of the Palestinian Standards for discharge to public sewers[12].

After individual treatment, effluent would be collected through the waste water collection system, which would be appropriately laid down alongside the on-site roads. The collected and treated effluent might be utilized for irrigating the surrounding agricultural field because of the scarcity of irrigation water in the Jericho area.

Technical specifications such as infiltration rates, minimum/maximum velocity, manhole location, sewer lines would be studied further in the following phase of the Study, after designating the site.

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[11] This estimate is given by applying statistical numbers of water consumption (m^3/ha/day) by type of industry, which are indicated in the Feasibility Study Report of Nablus Industrial Estate in 1998. 1,200 m^3/day (0.45 MCM/yr) is an arithmetic calculated from 625 m^3/day (0.23 MCM/yr) and 1,750 m^3/day (0.64 MCM/yr). The former is an estimate for the case of warehouse as minimum consumption (25 m^3/ha/day), and the latter is for the case of food processing as maximum consumption (70 m^3/ha/day). See 5.4.2 in detail.

[12] See Technical Note II: Environmental and Social Consideration.

(4) Solid Waste Collection

The amount of solid waste varies according to the production process, the materials used in the production, the types of product, and the quantity of finished products. Solid waste from food industries could be disposed of by the factories as their waste materials (organic waste) could be composted and recycled which could generate another source of income. On the other hand, stone industries, for example, have waste materials that could not be treated by a normal waste treatment plant, and they need to transport the waste to the final disposal place.

Jericho municipality is currently planning to extend their existing dumping site to prolong the lifetime to cope with the future increase in solid waste. Thus, the Industrial Park would need a close coordination for solid waste management issue in the following phase of the Study, after designating the site.

(5) Storm Water Drainage

Since the probable site for the Industrial Park is supposed to be somewhere in the southern part of the Jericho area where several *Wadi*s are recognized, it is necessary to pay attention to the storm water drainage issues.

One of the probable countermeasures is to construct an artificial pond for retaining water before draining away. Such a pond would have several indirect effects other than draining storm water. A retention pond and its surroundings could be an open space where people can refresh and relax, and also the pond water could be utilized in case there is a fire in the area. However, laying out this kind of pond in the industrial estate might cause low land use efficiency, possibly giving negative impact on the profitability. Therefore it is necessary to consider the validity of pond construction as well as to study in detail about the rainfall intensity and geographical condition of the site in the following stage of the Study.

(6) Power Supply

Electricity demand per factory varies according to the characteristics of the products, the way of processing, etc. For instance, food and beverage industry or chemical & cosmetics industry consumes a lot of power, while textile & closing industry uses smaller power. Assuming the Park (Phase I) would accommodate 50 factories/industries, approximately 10 MVA (50 factories x 165 kW = 8.25 MW, plus street lighting, individual waste water treatment…) of power demand is estimated to be required[13].

[13] This estimate is given by applying statistical numbers of power demand (kW/factory) by type of industry, which are indicated in the Feasibility Study Report of Jenin Industrial Estate in 1998. 165kW/factory is based on the arithmetic average of 155 kW/factory (an average of food and beverage industry) and 175 kW/factory (an average of chemical and cosmetics industry).

Currently, there are two transformer stations in the southern part of Jericho city. One is located near the intersection of Route 1 and the regional trunk road No. 449 accessing to the Jericho city center with the capacity of 15 MW. While, the other is located close to Inter Continental Hotel along the road No. 449 with its capacity of 10 MW.

Given the current power peak load of 13 to 15 MW in the Jericho area, the electricity demand estimated for the Park could be covered within the existing capacity. As a new transmission line carrying another 20 MW of electricity from Jordan is going to be completed in installation by the end of 2007[14], there would still be room in the capacity enough to supply for the future increase of consumption, including Phase II of the Park.

Since the transmission grid (33 kV) from the said stations is available in the area, the Park is considered to be easy for securing power. Further technical specifications, such as distribution cable capacity, power transformer installation, distribution feeder lining, etc., should be discussed with the technical division of JDECO in the following phase of the Study, based on a detailed engineering plan.

(7) Telecommunications Network

The Palestinian Telecommunications Company (Paltel) is responsible for providing telecommunication connections. It is estimated that each factory/enterprise would require 5 to 20 lines, depending on the type and size of factory/enterprise and number of employees. Taking an average of about 10 lines for each factory/enterprise, total number of line comes to 600 lines, including additional 100 lines for safety. Paltel will design the telecommunication network layout both on-site and off-site, once a detailed engineering plan of the Industrial Park is prepared. It is understood that initial costs for telecommunications infrastructure would be funded by Paltel.

[14] Source: Interview with technical division of JDECO (Jerusalem District Electricity Company).