

**Pre-Feasibility Study**  
**Production of Healthy Baked products**  
**Balqa**

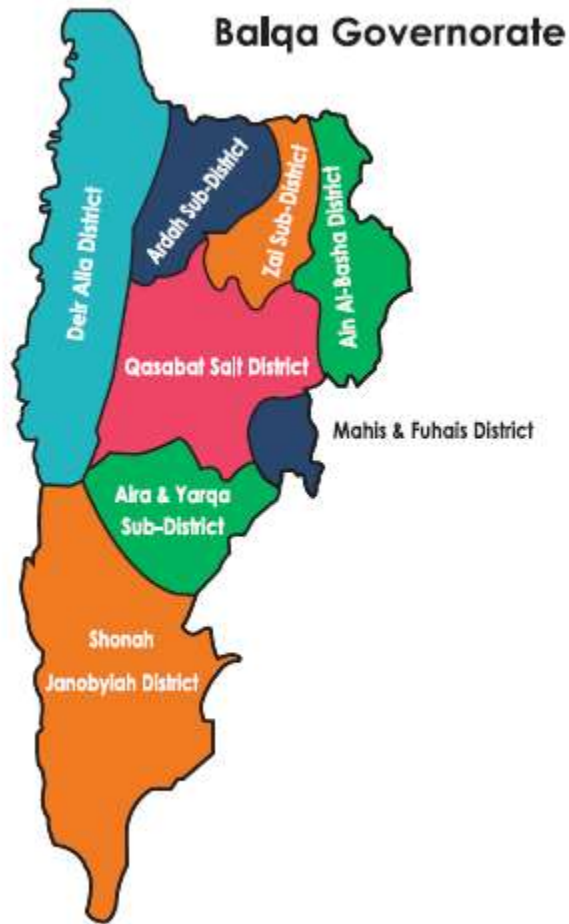
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## Table of Contents

<b>1. EXECUTIVE SUMMARY .....</b>	<b>3</b>
<b>2. THE MACROECONOMIC ENVIRONMENT .....</b>	<b>6</b>
2.1 AN OVERVIEW OF THE HASHEMITE KINGDOM OF JORDAN .....	6
2.2 POPULATION .....	7
2.3 ECONOMIC INDICATORS IN THE KINGDOM .....	9
2.4 THE JORDANIAN INVESTMENT ENVIRONMENT .....	13
2.5 THE ECONOMIC ENVIRONMENT IN THE SHORT AND MEDIUM TERM.....	16
<b>3. MARKET STUDY .....</b>	<b>17</b>
3.1 PROJECT DESCRIPTION.....	17
3.2 EXPECTED PRODUCTS AND SERVICES .....	17
3.3 THE DEMAND ON HEALTHY FOOD PRODUCTS.....	17
3.4 MARKET ANALYSIS.....	19
3.5 PRICE ANALYSIS .....	28
3.6 MARKETING STRATEGY .....	29
3.7 THE EXPECTED MARKET SHARE .....	30
<b>4. TECHNICAL STUDY .....</b>	<b>31</b>
4.1 THE DESIGNED PROJECT CAPACITY .....	31
4.2 THE REQUIRED FIXED ASSETS.....	31
4.3 THE REQUIRED HUMAN RESOURCES .....	33
4.4 SPECIAL REQUIREMENTS .....	37
4.5 THE REQUIRED LICENSES.....	39
4.6 PROJECT TIMETABLE .....	40
<b>5. FINANCIAL STUDY .....</b>	<b>41</b>
5.1 FINANCIAL ASSUMPTIONS .....	41
5.2 INVESTMENT COST.....	42
5.3 FINANCING.....	42
5.4 REVENUES.....	42
5.5 THE PROJECTED COSTS .....	44
5.6 PROJECTED FINANCIAL STATEMENTS .....	46
5.7 FINANCIAL, ECONOMIC AND SOCIAL ANALYSIS .....	50
<b>6. RISK AND SENSITIVITY ANALYSIS.....</b>	<b>53</b>
6.1 RISK ANALYSIS .....	53
6.2 SENSITIVITY ANALYSIS.....	57



## 1. Executive summary

This study aims at determining the Pre-Feasibility study for the establishment of a factory to produce healthy baked products of various types of bread, biscuits, cakes and sweets in Al-Balqa Governorate.

The project will produce healthy baked goods in line with the current trends in using healthy food and baked products by different segments of the population. There has been a significant demand for these products recently. This is due to the more attention and promotion of a healthy lifestyle to fight obesity and various diseases of diabetes, high blood pressure, cholesterol, and other diseases caused by the intake of high sugars and salts. The following table shows the initial indicators of the project.

**Table 1: initial indicators of the project**

<b>Project Name</b>	Healthy Backed Products Factory
<b>Sector</b>	Industrial– Food Industries
<b>Governorate</b>	Balqa
<b>Region</b>	Al Salt Industrial Area
<b>Products/Services</b>	<ul style="list-style-type: none"> <li>• Healthy Bread of different types</li> <li>• Healthy Crackers and Shaborah</li> <li>• Healthy Biscuits</li> <li>• Healthy pastries and confectioneries</li> <li>• etc</li> </ul>
<b>Project Description</b>	<p>The Healthy Backed production factory will be established in Balqa Governorate in Al Salt Industrial Zone. The project will be established on a land of an area of 2000 m<sup>2</sup> and the area of the buildings will be 2000 m<sup>2</sup>. The factory will have five modern main production lines for the sake of producing different backed products such as bread, biscuits, pastries, cakes, crackers, and Shaborah .</p> <p>The total production capacity of the project in the first year will reach about 750 tons of healthy baked products and will increase annually to reach 875 tons of healthy backed products in the fifth year. The project will have approximately 46 employees.</p> <p>In the first year, the sale price of healthy breads will be about JD 2.8 per Kg. The average sale price for healthy cakes, crackers and shabora is about JD 4.6 per Kg. The average sale price for healthy biscuits is about JD 4.0 per Kg, while the average sale price for sweets confectioneries, pastries in the first year will be JD 8.0 per Kg.</p>

<b>Target Market</b>	<ul style="list-style-type: none"> <li>• Retailers in the Jordanian market</li> <li>• A segment of citizens who are interested in healthy food</li> <li>• Export to Middle Eastern markets</li> </ul>
<b>Investment Cost</b>	The investment cost of the project reaches JDs 1.3 million
<b>The Average return on Investment</b>	The average return on investment during five years is about %18.9
<b>Internal Rate of Return</b>	The internal rate of return of the project is %23
<b>Average added value of the Project</b>	The average added value of the project during five years reaches about JDs 536thousand
<b>Risk Assessment</b>	The Sensitivity Analysis indicates a low risk in case of 10% increase in investment cost, or 10% increase in operating costs, whereas a high risk is indicated in case of 10% decrease in revenues.
<b>The project Justifications</b>	<ul style="list-style-type: none"> <li>• Availability of raw materials in Jordan</li> <li>• Increased demand for healthy food</li> <li>• Spread of obesity, diabetes, stress</li> <li>• The presence of high level of imports especially from Kuwait and thus will help work to reduce imports</li> <li>• Ability to export and obtain foreign currency and thus support trade balance</li> <li>• Generation of job opportunities for employment</li> </ul>
<b>Partners/Stakeholders</b>	None

## 2. The Macroeconomic Environment

### 2.1 An Overview of the Hashemite Kingdom of Jordan

The Hashemite Kingdom of Jordan is a landlocked country surrounded by land except at its southern extremity at the port of Aqaba, where that area is the only sea exit area in Jordan. The Kingdom is bordered at its west side by Palestine and the Mediterranean Sea, at its south and east by the Kingdom of Saudi Arabia, at north east by Iraq and at north by Syria.

Figure1 : Map of the Hashemite Kingdom of Jordan



Jordan is marked by three climatic zones from west to east including the Jordan Valley, most of which lies below sea level and is considered subtropical, and upland areas to the east of the Jordan Valley, ranging in height from 100 to 1500 meters above sea level and this is one of the areas dominated by Mediterranean climate, and the desert areas stretching to the east of the highlands.

The total area of the Kingdom is approximately 89.3 thousand square kilometers, and the semi-desert conditions prevail in over 80% of this area where there are some wet lands settings like Azraq Basin.

The kingdom is divided administratively into twelve governorates distributed into three regions: the Northern Region (includes the governorates of Irbid, Mafraq, Jerash and Ajloun) while the Central Region (includes the governorates of the capital, Zarqa, Balqa, Madaba) and the Southern Region (includes the governorates of Karak, Tafila, Ma'an, Aqaba), and the major cities are Amman (the capital), Zarqa and Irbid.

## 2.2 Population

Based on the General Census of Population and Housing in 2015, the population in the kingdom amounted to about 9.5 million people with a population density of 107.3 inhabitants per km<sup>2</sup>, where the Capital City knocked off other governorates by population amounting to about 4 million people and a population density of 538.8 inhabitants per km<sup>2</sup>, mainly because Amman is the most attractive governorate for Jordanians and for those coming to Jordan from other countries, followed by Irbid Governorate with a population of 1.8 million people, and then Zarqa Governorate with a population of 1.4 million. Tafila Governorate which is considered to be the least populous governorate whose population is about 96 thousand people.

**Table 2: Number of population and population density in the Kingdom for 2015**

Governorate	Population (people)	Area (Km <sup>2</sup> )	Population density (people/ km <sup>2</sup> )
<b>Central Region</b>			
Capital	4007526	7,579	528.8
Zarqa	1364878	4761	286.7
Balqa	491709	1120	439.0
Madaba	189192	940	201.3
<b>North Region</b>			
Irbid	1770158	1572	1126.1
Mafraq	549948	26551	20.7
Jerash	237059	410	578.2
Ajloun	176080	420	419.2
<b>Southern Region</b>			
Karak	316629	3495	90.6
Tafeileh	96291	2209	43.6
Maan	144082	32832	4.4
Aqaba	188160	6905	27.2
<b>Total of Kingdom</b>	<b>9531712</b>	<b>88793.5</b>	<b>107.3</b>

Source: Department of Statistics, Jordan General Population and Housing Census, 2015

On the other hand, the population growth rate has reached about 3% in 2010 and increased to 9% during the years 2013 and 2014 and then dropped a little during 2015 to reach about 8%, according to demographic surveys for the Department of Statistics. The reason for the high growth rates is attributed to the influx of large numbers of refugees from Syria to the Kingdom which resulted in a marked decline in per capita real GDP index by 5.4% to JD 1,197.4, based on the Statements of the Central Bank of Jordan.

The unemployment rate among Jordanians also witnessed a rise by 1.1 percentage to reach to 13%, due to the structural imbalances that the labor market is suffering from and the acquisition

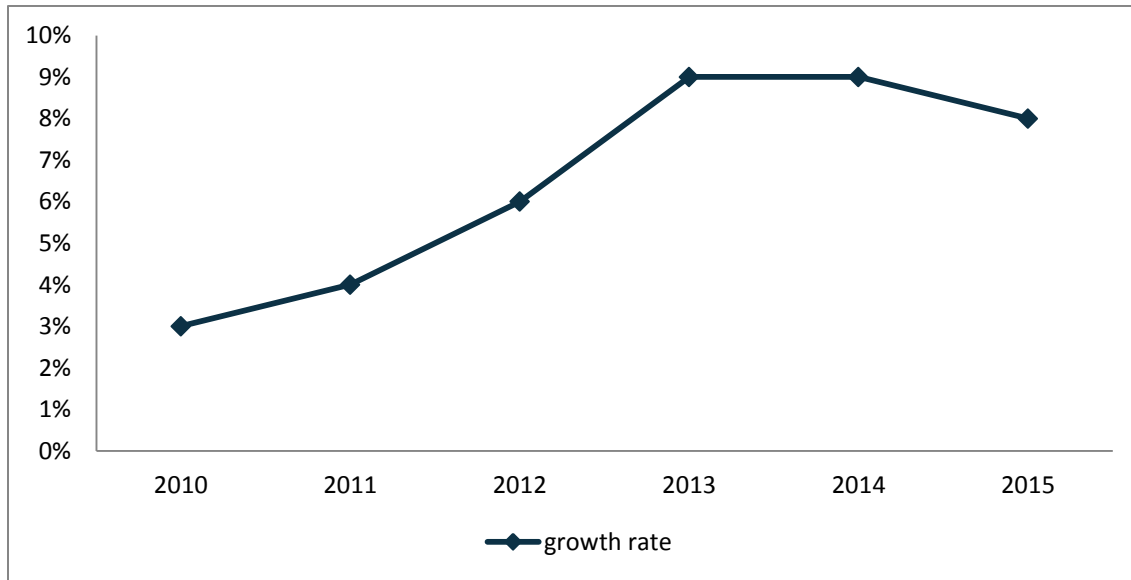
of the low-paid foreign workers on a large number of new jobs in the economy, according to the Central Bank of Jordan.

**Table 3: Number of population and population growth in the Kingdom, thousand**

	2010	2011	2012	2013	2014	2015
population	6698.0	6993.0	7427.0	8114.0	8804.0	9531.7
growth rate	%3	%4	%6	%9	%9	%8

Source: Department of Statistics

**Figure 2: population growth rate in the Kingdom**





### 2.3 Economic Indicators in the Kingdom <sup>1</sup>

Countries across the Middle East are still suffering from instability and closure or partial closure of borders; including the borders of important markets for the Kingdom's products. These factors led to a decline in the performance of many of the economic sectors, including the external sector, national exports, touristic income, and Foreign Direct Investment (FDI), and they contributed to a slowdown in the economic growth to about 2.4% in 2015, compared to 3.1% in 2014. The growth achieved in 2015 came from growth across several economic sectors, especially in the finance, insurance, and real estate services; the transport, storage, and communications services; the mining industry; the manufacturing industry; and the agriculture sector. These sectors contributed a combined 1.8 percentage points (or 75%) of the growth rate achieved during 2015, reflecting the diversity of the economic growth sources in the Kingdom.

Additionally, the general price level registered a decline in the prices of oil, commodities, and other related services in the global markets. Therefore, the general price level, measured by the relative change in the average consumer price index deflated by 0.9% in 2015, compared to the inflation of 2.9% in 2014.

The budget deficit, after aid, increased by 1.2% to a record 3.5% of GDP, compared with 2.3% in the previous year. In addition, the Balance of Payments' Current Account recorded a deficit of 8.9% of GDP, compared with 7.3% in 2014. At the end of 2015, the net public debt amounted to 22,847.5 million Jordanian Dinars (85.8% of the GDP), with an increase of 5.0% of the GDP. However, the total public debt reached 24,876.5 million Jordanian Dinars (93.4% of GDP). This increase resulted from financing both the general budget deficit and the guarantees for loans for the National Electricity Company and the Water Authority, as well as the slowdown of economic growth during 2015. The indebtedness of the National Electricity Company and the Water Authority recorded 6.7 billion Jordanian Dinars at the end of 2015.

On the monetary and banking front, most monetary indicators experienced positive development in performance in 2015, primarily in the Central Bank's foreign reserves, which maintained comfortable levels that amounted to about \$14.2 billion. The dollarisation rate decreased, which reflected positive demand for Jordanian Dinars in comparison to other major foreign currencies. With regards to the activities of licensed banks, the outstanding balance of credit increased by 9.5%, to reach 21,103.5 million Jordanian Dinars at the end of 2015. The total deposits registered with licensed banks increased by 7.7%, to reach 32,598.5 million Jordanian Dinars at the end of 2015. The increase in deposits came as a result of the high dinar deposits, which increased by 2,001.4 million Jordanian Dinars (8.3%), and higher foreign currency deposits, which increased by 336.1 million Jordanian Dinars (5.4%).

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<sup>1</sup> The Central Bank of Jordan

Furthermore, many of the external sector indicators registered a drop in performance in 2015 due to the deepening instability in the region and almost full closure of the borders with Iraq and Syria. However, the drop in oil prices in the global markets contributed to the decline in the Kingdom's imports bill for energy, as it dropped by 40.6%, which in turn contributed to a decline in total imports and the trade deficit by 11.4% and 14.0%, respectively. Thus, the Current Account, excluding aid, declined to 11.9% of GDP, compared to 12.4% in 2014.

The Current Account deficit increased after aid, to reach 2,365.6 million Jordanian Dinars (8.9% of GDP) in 2015, compared with a deficit of 1,851.7 million Jordanian Dinars (7.3% of GDP) in 2014. This decline is due mainly to the decline in total exports by 6.6% and the decline in surplus in the services account by 27.7%, as touristic income decreased by 7.1%, and the decline in the surplus in the current transfers account decreased as a result of reduced foreign aid.

Capital and financial accounts resulted in a net inflow of 1,593.7 million Jordanian Dinars in 2015, compared to 909.0 million Jordanian Dinars in 2014; this was due to the Kingdom's higher net obligations towards the outside world. Foreign Direct Investment registered a net inflow of 909.4 million Jordanian Dinars, and the reserved investment registered an inflow of 918.4 million Jordanian Dinars due to the Kingdom issuing Eurobonds that are worth \$2.0 billion in the global markets. The withdrawal of bank loans on behalf of the Central Bank increased the use of funds from the International and Arab Monetary Funds by 543.3 million Jordanian Dinars. This led to the registration of a surplus in the overall Balance of Payments of 328.7 million Jordanian Dinars during 2015, compared to a surplus of 1,550.7 million Jordanian Dinars during 2014.

According to the Central Bank of Jordan, the increased international investment at the end of 2015 showed an increase in the external net liabilities of the Kingdom, which reached 24,357.5 million Jordanian Dinars, compared with 22,578.8 million Jordanian Dinars at the end of 2014. This was due to an increase in the external balance of assets and financial liabilities for all of the economic sectors in the Kingdom, which reached to 18,657.9 million Jordanian Dinars and 43,015.5 million Jordanian Dinars, respectively, during 2015.

**Table 4: main economic indicators 2011 to 2015 in millions of dinars**

	2011	2012	2013	2014	2015
<b>Population (millions)</b>	6.993	7.427	8.114	8.804	9.532
<b>Unemployment rate</b>	12.9	12.2	12.6	11.9	13.0
<b>Production and Prices</b>					
GNP at current market prices	20,288.8	21,690.0	23,611.2	25,141.2	26,289.6
GDP at current market prices	20,476.6	21,965.5	23,851.6	25,437.1	26,637.4
The rate of growth in GDP at constant market prices (%)	2.6	2.7	2.8	3.1	2.4
The total national disposable income at current prices	23,743.5	24,774.9	28,424.5	30,302.1	30,234.7
The rate of growth in gross national disposable income at current prices (%)	4.7	-0.2	8.6	3.1	-2.4
Change in the index of consumer prices (%)	4.2	4.5	4.8	2.9	-0.9
The change in the GDP deflator (%)	6.4	4.5	5.6	3.4	2.3
<b>Money and Banking</b>					
Exchange rate of the Jordanian dinar to the US dollar	1.410	1.410	1.410	1.410	1.410
Money supply (P2)	24,118.9	24,945.2	27,363.4	29,240.4	31,605.5
Net foreign assets of the banking system	9,370.1	6,665.5	6,923.4	7,932.3	8,137.3
Net domestic assets of the banking system	14,748.8	18,279.7	20,440.0	21,308.1	23,468.2
Net debt of the government	6,701.4	9,461.3	10,494.8	10,473.9	11,386.4
Private sector debts (Residents)	14,925.0	15,953.6	17,222.5	17,852.8	18,704.5
Other factors <sup>(1)</sup>	-6,877.6	-7,135.2	-7,277.3	-7,018.5	-6,622.7
Deposits in dinars at licensed banks	19,119.1	17,711.1	21,003.0	24,013.1	26,014.5
Foreign currency deposits at licensed banks	5,258.8	7,258.6	6,590.2	6,247.9	6,584.0
Rediscount rate (%)	4.50	5.00	4.50	4.25	3.75
Treasury bills interest rate for 6 months (%)	3.232	3.788	-	-	-
<b>Public Finance</b>					
Total revenue and foreign aid	5,413.9	5,054.2	5,758.9	7,267.6	6,796.4
Ratio to GDP (%)	26.4	23.0	24.1	28.6	25.5
Total spending	6,796	6,878.2	7,077.1	7,851.1	7,722.9
Ratio to GDP (%)	33.2	31.3	29.7	30.9	29.0
Overall deficit/savings (on an accrual basis)	-1,382.7	-1,824.0	-1,318.2	-583.5	-926.5
Ratio to GDP (%)	-6.8	-8.3	-5.5	-2.3	-3.5
Net outstanding balance of the domestic public debt	8,915.0	11,648.0	11,863.0	12,525.0	13,457.0
Ratio to GDP (%)	43.5	53.0	49.7	49.2	50.5

	2011	2012	2013	2014	2015
Outstanding external public debt <sup>(2)</sup>	4,486.8	4,932.4	7,234.5	8,030.1	9,390.5
Ratio to GDP (%)	21.9	22.5	30.3	31.6	35.3
<b>Foreign Trade and Balance of Payments</b>					
Current account	-2,098.8	-3,344.9	-2,487.7	-1,851.7	-2,365.6
Ratio to GDP (%)	-10.2	-15.2	-10.4	-7.3	-8.9
Trade balance (Deficit)	-6,261.7	-7,486.6	-8,270.1	-8,495.6	-7,249.3
Ratio to GDP (%)	-30.6	-34.1	-34.7	-33.4	-27.2
Commodity exports	5,684.5	5,599.5	5,617.9	5,953.6	5,558.3
Imports of goods (FOB) <sup>(3)</sup>	11,946.2	13,086.1	13,888.0	14,449.2	12,807.6
Balance of services (net)	896.0	1,332.3	1,209.5	1,778.9	1,286.4
Income account (net)	-187.8	-275.5	-240.4	-295.9	-347.8
Current transfers (net)	3,454.7	3,084.9	4,813.3	5,160.9	3,945.1
Capital and financial account (net)	2,298.9	3,808.9	1,811.1	908.9	1,593.7
Direct foreign investment in Jordan (net)	1,055.0	1,074.3	1,281.2	1,426.7	905.1

Source: Monthly Statistical Bulletin, Central Bank of Jordan

1. Includes the debts of public and financial institutions and other factors, as shown in the Monetary Survey Agenda.
2. This represents the total balance of drawn loans, minus total repayments.
3. Does not include imports of non-resident entities.

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## 2.4 The Jordanian Investment Environment

### **Investment Law No. 30 for 2014**

Investment Law no. 30 for 2014 is considered an appropriate legislative framework to attract foreign investments and stimulate local investments. It is considered a competitor to other investment laws in the region because it contains many advantages, incentives, and guarantees, and it offers a range of incentives and benefits in and outside the Development and Free Zones. The law includes a series of public provisions, such as foreign investment guarantees (depositing and withdrawal of capital, investment management, and transfers) and the inadmissibility of the disbarment of investment property. The law offers provisions to settle investment disputes, protection, and encouragement of mutual investment agreements between the Kingdom and other countries.

The following shows the major incentives granted by the law:

#### **❖ Incentives and Benefits outside the Development and Free Zones**

- The production inputs for the industrial and crafts sectors are exempted from customs duties.
- The return of the general sales tax on the production inputs for the industrial and crafts sectors within 30 days.
- Production inputs and fixed assets of the industrial and crafts sectors are exempted from customs duties and are granted a reduction in general sales tax to 0%.
- Returning to the sales tax on the services needed to practice economic activity within 30 days.
- The goods that are necessary for the economic activities of the following sectors are exempted from customs duties and are subject to 0% general sales tax:
  - Agriculture and livestock, hospitals and specialised medical centres, hotels and touristic facilities, touristic entertainment and recreation centres, call centres, scientific research centres and laboratories, art and media production, convention centres and exhibitions, transfers and/or distributions and/or extraction of water, gas and oil derivatives, air transport, maritime transport, and railways.

#### **❖ Incentives and Benefits inside the Development and Free Zones**

- 5% income tax on the income generated from economic activity within the Development Zone.
- 5% income tax on income generated from economic activity in the industrial sector.
- Tax exemptions that are granted in the Kingdom on goods and services exports.
- Reduction of sales tax to 0% on goods and services that are used by the establishment in order to exercise its activity inside the Development Zone.

- 7% sales tax on specific services provided by a registered company in the zone when these services are consumed in the zone.
- Exemptions from customs duties except for a specified number of goods.

❖ **The Reduction of Income Tax in the Least Developed Areas for Regulation No. 44 for 2016**

- The reduction of income tax in the least developed areas for Regulation No. 44 for 2016 was approved. It aims to create an attractive environment for investments that promote economic development through the reduction of income tax outside the Development Zones and in the least developed areas in the Kingdom. The regulation specified the areas that are considered least developed and identified the activities that are excluded from this reduction.
- Under the provisions of Articles 4 and 5 of this regulation, the areas that were categorised as least developed and enjoy the reduction in income tax are divided into four categories; each category enjoys a reduction in income tax on their activities for a period of 20 years.
- Category A includes the Northern Valley District, Deir Alla District, Shouneh Al-Janoubieh District, the Southern Valley District, Rweished District, the Northern Desert District, the North Western Desert District, Al-Azraq Province, Al-Jiza District except for the borders of the new Al-Jiza municipality, Al-Moakar District except for the borders of Al-Moakar municipality, and the Governorate of Aqaba except for the Aqaba Special Economic Zone. The reduction rate for this category is 100%.
- Category B includes the Governorates of Maan, Tafileh, Karak, and Ajloun. The reduction rate for this category is 80%.
- Category C includes the Governorates of Jarash, Mafraq, and Irbid except the borders of the Greater Irbid Municipality. The reduction rate for this category is 60%.
- Category D includes the Governorates of Madaba, Balqa, Amman except for the Greater Amman Municipality, and Zarqa except for the borders of Zarqa Municipality and Russaifeh Municipality. The reduction rate for this category is 40%.

❖ **Trade and Free Trade Agreements**

The most important agreements are:

- Jordan joining the World Trade Organisation in 2000, which led to the opening of the markets of 150 countries for Jordanian exports in goods and services, and provided new opportunities of access to other countries within a clear and transparent environment of laws, regulations, and procedures.
- A series of regional trade agreements, such as the Jordan Partnership Agreement with the European Union, Agadir Agreement, Free Trade Arab Agreement, the free trade agreement between Jordan and the European Free Trade Association, and the adoption of the Euro-Mediterranean simplification of the rules of the Origin System, which includes the decision

to simplify the rules of the origins of Jordanian products between Jordan and the European Union came into effect on July 19, 2016, and will remain in effect until December 31, 2026.

- A series of bilateral trade agreements with many countries, such as the free trade agreement between Jordan and the United States of America, the Qualified Industrial Zones Agreement, the free trade agreement between Jordan and Singapore, the free trade agreement with Turkey, the free trade agreement with Canada, and many other agreements.
- Jordan has signed more than 35 agreements with Arab and foreign countries in order to prevent double taxation between Jordan and these countries, thus protecting investors' rights.
- The Agreement of Promotion and Protection of Investments and the Movement of Capital between the Arab Countries was signed in 2000 with 11 Arab countries who are members of the Arab Economic Unity Council, in order to establish an appropriate environment for investments and economic cooperation between investors in the Arab countries, thus pushing and stimulating investment activities by providing encouragement and mutual protection for Arab investments.

#### **Human Development Report for 2015**

The Human Development Report that was issued by the United Nations Development Program in 2015 showed that Jordan fell 3 points to number 80. Please note that Jordan's place on the Human Development Report index value has improved slightly.

#### **Global Competitiveness Report**

The Kingdom's rank has improved by one point in the Global Competitiveness Report for the year 2016/2017, at 63 out of 138 countries compared to 64 out of 140 countries in the 2015/2016 report. It is considered an insignificant improvement, especially because of the reduction in the number of countries participating in this year's report. Amongst the Arab countries, Jordan was ranked after the United Arab Emirates, Qatar, the Kingdom of Saudi Arabia, Kuwait, and Bahrain, who were ranked 16, 18, 29, 34, and 39, respectively.

#### **Doing Business Report**

In the Doing Business Report that was issued by the World Bank Group, Jordan is still ranked 118, up one rank from the 2016 report, because of the variation in the performance of the different sub-indicators. Jordan ranked ninth among the Arab countries; the United Arab Emirates was ranked first among the Arab countries at 26, followed by Bahrain at 63 and Oman at 66.

## 2.5 The Economic Environment in the Short and Medium Term

Risks analysis implemented by BMI indicates that the Jordan's political and economic risks in the short and medium term are less than the overall average of the world and the Middle East. The state's risks and the operational risk are estimated to be within the acceptable levels. The international institutions' forecasts point out that the economic and foreign trade indicators are expected to achieve acceptable rates of growth with the exception of the continued increase in internal and external indebtedness.

**Table 5: Assessment of short and long-term risks**

	Long term		Short term		Operational risks	State risks
	political	Economic	political	economic		
Jordan	63.1	39.2	66.6	46.2	58.7	55.4
Turkey	60.2	49.4	58.4	56.9	55.9	56.1
Egypt	53.3	45	52.4	48.7	42.9	47.5
Lebanon	45.8	54	55.4	53.5	44.2	49.5
West Bank and Gaza	33.1	38.1	32.2	36.5	32.5	34.3
Syria	22.9	24.4	22.4	23.6	29.3	26.1
Regional average	49.4	46.9	51.2	48.7	46.6	48.3
global average	64.1	50.7	61.3	51.9	49.8	54.6

Source: the economy and state risks, IHS, 15/09/2016

**Table 6: The most important key economic indicators 2016-2020**

Indicator	2016	2017	2018	2019	2020
The growth rate of GDP	2.6	2.7	2.8	3.2	3.1
GDP (in USD billions)	39.6	42.1	44.8	47.8	50.9
Population (In millions)	9.8	10.1	10.4	10.7	11.0
Consumer Price Index (% change)	-0.7	1.8	3.3	4	3.2
Exports (in USD billions)	7.3	7.6	8.2	8.8	9.6
Imports (in USD billions)	18.3	19.2	20.1	21.3	22.8
Foreign direct investment, the net value (in USD billions)	1.5	1.5	1.6	1.6	1.7
Foreign direct investment, the net value (% of GDP)	3.7	3.7	3.6	3.4	3.3
Foreign exchange reserves (in USD billions)	13.9	14.9	15.7	16.8	17.7
Total external debt (in USD billions)	24.4	27.8	30.7	33.7	36
Total external debt (% of GDP)	61.6	66	68.6	70.4	70.6
Total external debt (% of foreign currency earnings)	127.3	138.3	143.6	147.5	147.8

Source: the economy and state risks, IHS, 15/09/2016



### 3. Market Study

#### 3.1 Project Description

The project is a factory for the production of healthy baked products, which will produce various types of healthy baked goods such as healthy bread, biscuits, cakes and sweets. The project idea came due to the current trends towards paying more attention to healthy food products of all kinds including baked goods and others, as the demand has increased significantly during the recent period. The project will be established on an area of 2,000 m<sup>2</sup>, and will be located in Al-Balqa Governorate in Al-Salt Industrial Area.

#### 3.2 Expected products and services

Project expected products include:

- Healthy Bread of different types
- Healthy Crackers and Shaborah
- Healthy Biscuits
- Healthy pastries and confectioneries
- etc

#### 3.3 The Demand on Healthy Food products

The demand on healthy food products, especially baked goods, is increasing significantly. The main reason for the increased demand for these products is the increased tendency to get a healthy life style to fight and reduce the currently widespread diseases such as obesity, diabetes, high blood pressure and other chronic diseases that require a change in lifestyle and food.

The National Study, which is published by the National Center for Diabetes, Endocrinology and Genetics, on the prevalence of obesity, diabetes and other chronic diseases, indicated an increase in the prevalence of chronic diseases in the Kingdom. The following table shows the details on the prevalence of chronic diseases including diabetes, Arterial tension (blood pressure), obesity and cholesterol in the Kingdom in 2016.

**Table 7: The prevalence of chronic diseases in detail for the age group 25 years and above in the Kingdom for 2016**

Chronic Disease	The level of the disease according to the approved measurement	The number of patients aged 25 and above in the Kingdom	Percentage of patients to the Kingdom's population from the age group 25 and above *
Diabetes	The sugar level is less than 100	2,403,534	54.9%
	Sugar level (100 - 125)	1,112,018	25.4%
	The sugar level is more than or equal to 126	862,470	19.7%
High arterial tension	Arterial tension 95/160	1,221,468	27.9%
	Arterial tension 90/140	1,514,796	34.6%
	Arterial tension 85/135	1,851,903	42.3%
Obesity	Body mass index is less than 25	766,154	17.5%
	Body mass index (25-29)	1,462,259	33.4%
	Body mass index is greater than or equal to 30	2,149,609	49.1%
Fat	Total cholesterol	2,110,207	48.2%
	High - density cholesterol	1,611,112	36.8%
	Low - density cholesterol	2,092,695	47.8%
	Triglycerides	2,022,646	46.2%

Source: National study on prevalence of diabetes and other chronic diseases, National Center for Diabetes, Endocrinology and Genetics.

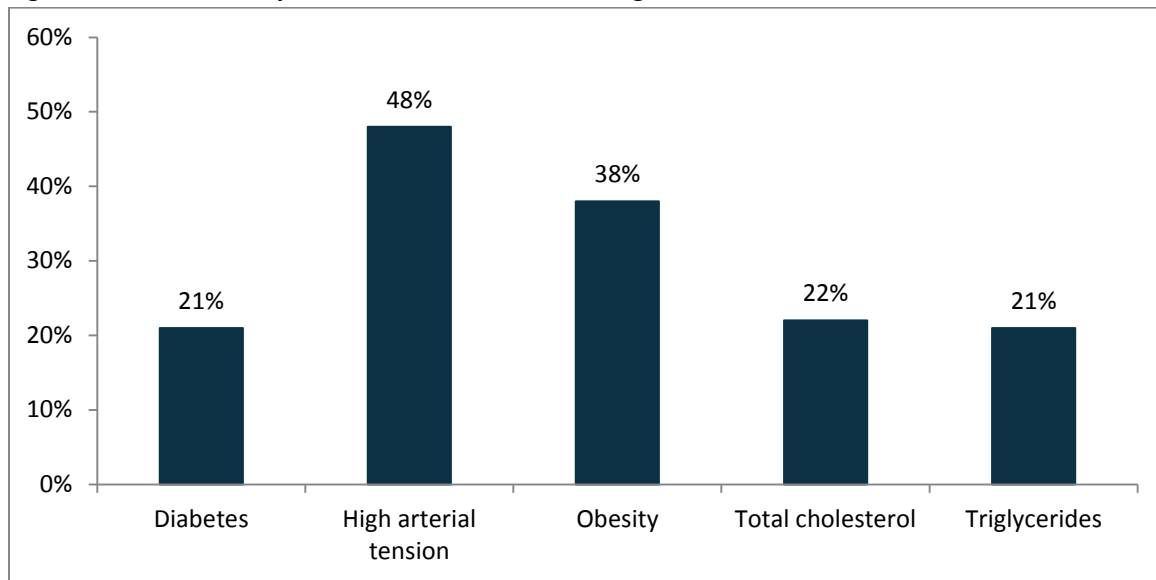
\* The percentages were calculated based on the total population of the Kingdom of the age group 25 and above, with a total population of 4,378,022.

A study conducted by the National Center for Diabetes, Endocrinology and Genetics illustrates that 38% of the total population are people over the age of 25 who are obese, and that 48% of the total population are people over the age of 25 who suffer from High Arterial Tension (blood pressure). In addition, 21% of the total populations are people over 25 years of age suffer from diabetes. These percentages indicate the high rates of obesity and chronic diseases in the Kingdom, which requires this segment of the population to pay attention to the quality of food and the use of healthy food and baked goods to maintain their health.

**Table 8: Rates of obesity and chronic diseases in the Kingdom for 2016**

	Number of patients aged 25 and above	Percentage of patients to the total population
Diabetes	1,974,488	%21
High arterial tension	4,588,167	%48
Obesity	3,611,868	%38
Total cholesterol	2,110,207	%22
Triglycerides	2,022,646	%21

**Figure 3: Rates of obesity and chronic diseases in the Kingdom for 2016**



### 3.4 Market Analysis

In recent years, there has been an increase in the demand for baked goods and healthy foods. As a result, specialized factories and bakeries have been established that produce all types of healthy baked goods in the Kingdom. In order to take a clear and comprehensive picture of the market status and market size of the healthy baked goods and to identify the main factories and bakeries that produce these products, the study team has conducted interviews and visits to several factories and institutions to help analyze the size of the market and the demand for healthy baked goods. The visits include the following:

- Ministry of Industry and Trade - Bakery Department
- General Union of Bakery Owners
- Healthy Reef Bakery

- Tannour Al-Dayaa Bakery
- Tannour Al-Aser Bakery
- Dr. Bashar Al-Eid Clinic

### **Healthy Tannour Bread**

It has been shown through the conducted interviews that there are specialized factories that produce some healthy baked goods. The factories of Healthy Reef Bakery and Tannour Al-Dayaa Bakery produce all types of healthy Tannour Bread, including bran, oats, corn or barley. This bread is not produced in any bakery or other factory in the Kingdom, as these factories are specialized in producing them, and they do not produce any type of healthy baked goods other than the healthy Tannour Bread, in addition to the Tannour Al-Aser factory, which is currently importing Tannour Bread from its main factory located in Lebanon.

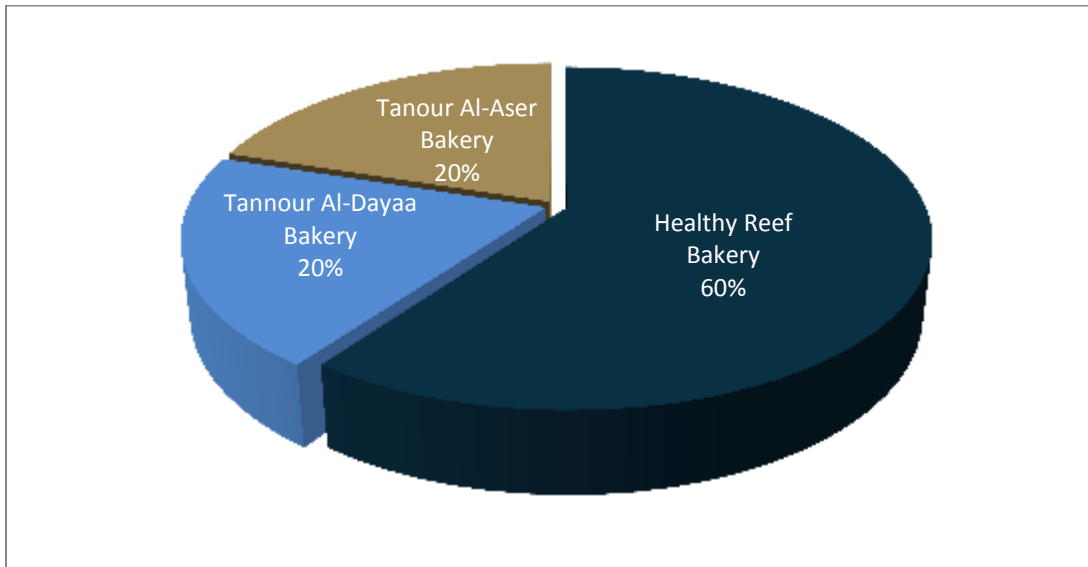
Based on the conducted interviews and field survey, the total market size of the healthy Tannour Bread in the Kingdom is estimated at about 1,700 tons per year. The table below shows that the Healthy Reef Bakery produces about 1,000 tons annually of all types of healthy Tannour Bread, which makes up about 60% of the market for the healthy Tannour Bread in the Kingdom, as this factory is one of the first that produced the healthy Tannour Bread in the Kingdom. Tannour Al-Dayaa Bakery and Tannour Al-Aser Bakery produce about 350 tons per year, and constitute about 20% for each of the total market size in the kingdom.

**Table 9: Market size of Healthy Tannour Bread in the Kingdom**

	Annual production (tons)	Percentage
Healthy Reef Bakery	1,000	60%
Tannour Al-Dayaa Bakery	350	20%
Tanour Al-Aser Bakery	350	20%
<b>Total</b>	<b>1,700</b>	<b>100%</b>

Source: Field surveys, calculation of Study Team

**Figure 4: Distribution of the market size of Healthy Tannour Bread in the Kingdom**



#### **Other bakeries**

As for the other major bakeries in the Kingdom, which produces various types of healthy baked goods such as oatmeal, bran, algae bread, as well as cakes, Shabura, biscuits, sweets and other healthy baked goods except for Healthy Tannour Bread that is only produced from the factories mentioned above. The production volume of all the major bakeries in the Kingdom is estimated at about 1,800 tons per year of various types of baked goods, according to the Bakery Department in the Ministry of Industry and Trade.

#### **Imports of Healthy Baked Goods**

The following table shows the volume of the Kingdom's net imports of baked goods of various types (healthy and non-healthy ones) such as bread, biscuits, bran and others for the years 2014 and 2015, according to Foreign Trade statistics issued by the Department of Statistics. It is noted that the Kingdom imports large quantities of baked goods both healthy and non-healthy, as the Kingdom's imports for the year 2015 reached about 20.6 thousand tons, with an increase of 9% over the imports of 2014, which is estimated at 18.9 thousand tons. It is also noted that the Kingdom imports large quantities of biscuits (healthy and non-healthy) that reached to 15 thousand tons in 2015, with an increase of 13% for the imports in 2014.

**Table 10: The volume of Kingdom's net imports of baked goods for the years 2014 and 2015**

Type	2014		2015		Percentage of change	
	Quantity (ton)	Value (in thousand JD)	Quantity (ton)	Value (in thousand JD)	Quantity	Value
Crispy Bread	14	25	66	77	371%	208%
Biscuit	13,330	20,972	15,032	23,874	13%	14%
Toasted bread and Rusk	665	1,446	539	1,071	-19%	-26%
bread	479	797	610	918	27%	15%
Tapioca and bran	483	408	205	225	-58%	-45%
Other products of rice chips and others	3,944	6,602	4,197	7,864	6%	19%
<b>Total</b>	<b>18,915</b>	<b>30,250</b>	<b>20,649</b>	<b>34,029</b>	<b>9%</b>	<b>12%</b>

Source: Department of Statistics, Foreign Trade

In order to determine the imports volume of healthy baked goods in each type, many field interviews and surveys were conducted with experts in this sector. The percentage of healthy biscuits was estimated at about 5% of the imported biscuits. In addition, the percentage of healthy products from rice chips and others was estimated at 25% of the total imports of these products, and the percentage of crispy bread, tapioca and bran was estimated at 75%. As for the healthy bread, toast and healthy Rusk, the percentage was estimated at 50% for each. The following table shows the percentage of healthy baked goods from the baked goods imports.

**Table 11: The Kingdom's imports estimates of healthy baked goods for the 2015**

Type	Total imported quantity	Percentage of healthy baked goods *(Ton)	Quantity of imported healthy baked goods **(Ton)
Crispy Bread	66	75%	50
Biscuit	15,032	5%	752
Toasted bread and Rusk	539	50%	270
bread	610	50%	305

Type	Total imported quantity	Percentage of healthy baked goods *(Ton)	Quantity of imported healthy baked goods ** (Ton)
Tapioca and bran	205	75%	154
Other products of rice chips and others	4,197	25%	1049
<b>Total</b>	<b>20,649</b>	<b>12%</b>	<b>2,579</b>

Source: Department of Statistics, Foreign Trade

\* The percentages were estimated based on interviews and field surveys

\*\* Calculation of the Study Team

Based on the above, the volume of the Kingdom's imports of various types of healthy baked goods for 2015 was estimated at 2,579 tons distributed over the various types of healthy baked goods. The most important products consisted of rice chips and others 41% of the total imports of healthy baked goods in an amount of 1,049 tons, followed by biscuits that accounted for 29% of the total imports of healthy baked goods with an estimated quantity of 752 tons.

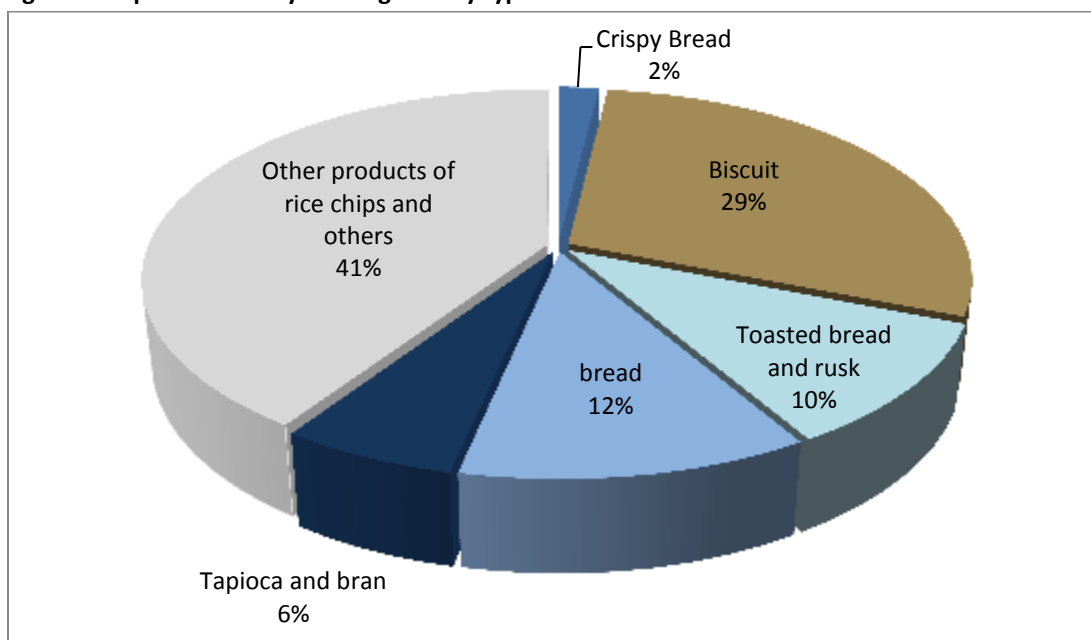
**Table 12: imported healthy baked goods by type for 2015**

Type	Quantity of imported healthy baked goods *	Percentage from the total imported healthy baked goods
Crispy Bread	50	%2
Biscuit	752	%29
Toasted bread and Rusk	270	%10
bread	305	%12
Tapioca and bran	154	%6
Other products of rice chips and others	1,049	%41
<b>Total</b>	<b>2,579</b>	<b>%100</b>

Source: Calculation of the Study Team

\* The percentages were estimated based on interviews and field surveys

**Figure 5: imported healthy baked goods by type for 2015**



### Total Market Size of Healthy Baked Goods

From previous information on market size estimates for healthy baked goods, the total market size of healthy baked goods in the Kingdom can be estimated at about 6,079 tons per year and by 0.64 kg/year per person. The size of the bakery market is distributed among the factories producing healthy Tannour Bread by 28% of the total market size of healthy baked goods, and other bakeries in the Kingdom with a percentage of 30% of the total market size of the healthy baked goods. In addition, the imports account for about 42% of the total market size of the healthy baked goods.

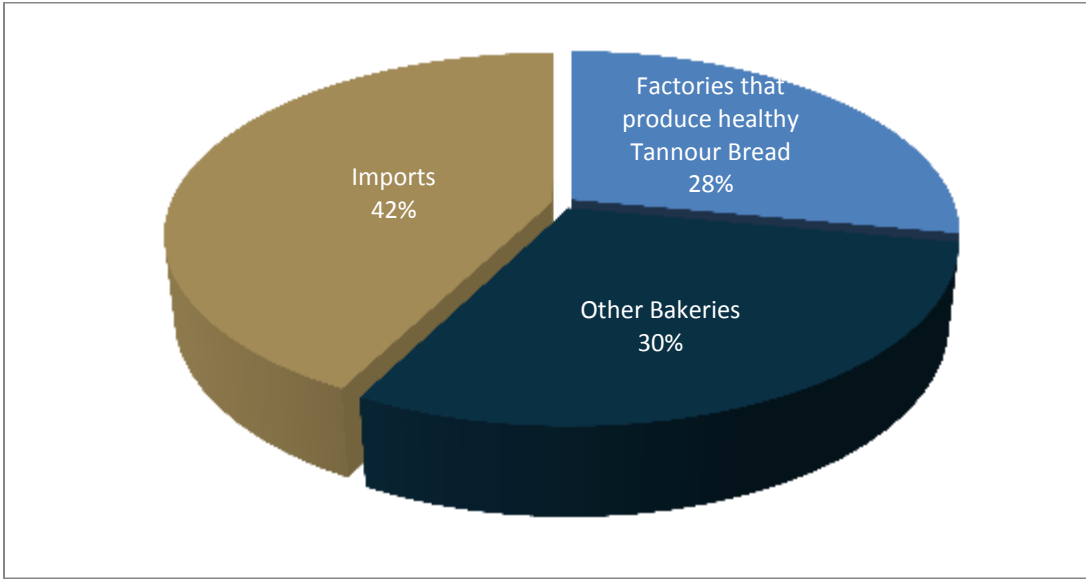
**Table 13: The total market size of healthy baked goods in the Kingdom**

	Annual production (tons)	Percentage
Factories that produce healthy Tannour Bread	1,700	%28
Other Bakeries	1,800	30%
Imports	2,579	%42
<b>Total</b>	<b>6,079</b>	<b>%100</b>

Source: Field Surveys



**Figure 6: Distribution of the total market size of healthy baked goods in the Kingdom**



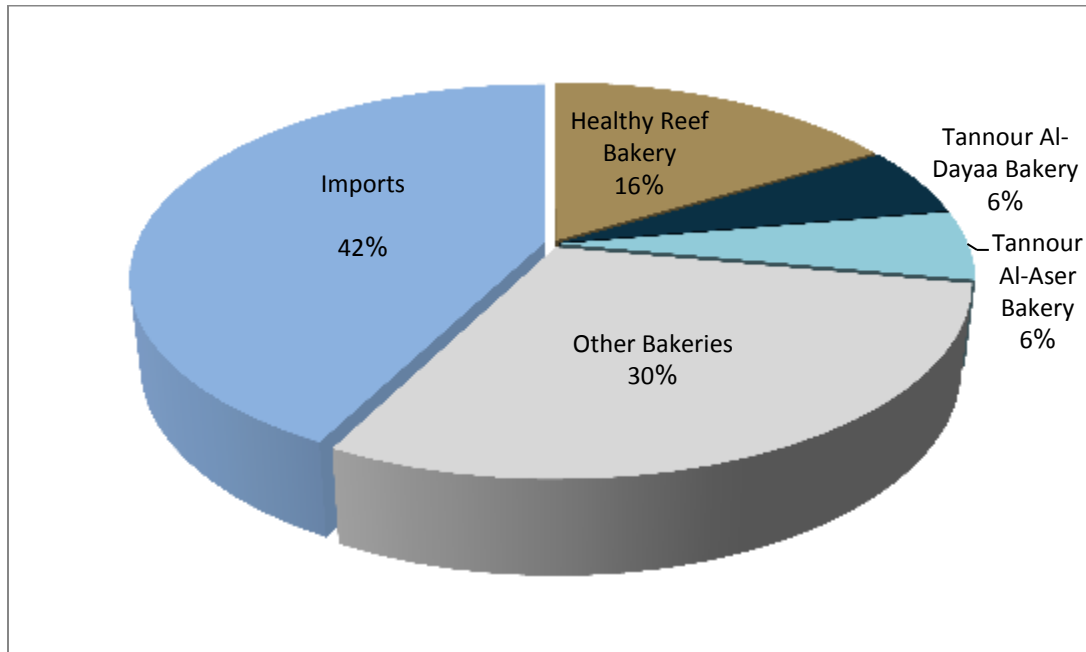
When analyzing the total market size of all types of healthy baked goods, we find that the Healthy Reef Bakery accounts for about 16% of the total market size of healthy baked goods. The Tannour Al-Dayaa Bakery accounts for about 6% of the total market size of the healthy baked goods, and Tannour Al-Aser Bakery accounts for about 6%. As for the other bakeries located in the Kingdom, which produce healthy baked goods make up about 30% of the total market size of healthy baked goods, and the imports constitute 42% of the total market size of the healthy baked goods.

**Table 14: Distribution of market size of healthy baked goods in the Kingdom**

	Annual production (tons)	Percentage
Healthy Reef Bakery	1,000	%16
Tannour Al-Dayaa Bakery	350	%6
Tannour Al-Aser Bakery	350	%6
Other Bakeries	1,800	%30
Imports	2,579	%42
<b>Total</b>	<b>6,079</b>	<b>%100</b>

Source: Field Surveys

**Figure 7: Distribution of market size of healthy baked goods in the Kingdom**



### Overview of the Main Competitors

This part of the study shows the companies that produce healthy baked goods in the Kingdom, as they are considered the main competitors of the project.

<b>Company Name</b>	Healthy Reef Bakery
<b>Location</b>	Madaba
<b>General Description</b>	<ul style="list-style-type: none"> <li>• Healthy Reef Bakery Company was established in Jordan in 2013.</li> <li>• The factory has two branches, the first was established in Saudi Arabia and the other was established in Jordan.</li> <li>• The company has about 22 employees.</li> <li>• The factory area is about 1200 m<sup>2</sup>, consisting of three floors, with an area of 400 m<sup>2</sup> for each.</li> <li>• The factory's production of healthy bread is estimated at 1,000 tons per year.</li> <li>• There is no export of factory products.</li> <li>• The investment cost of the factory is estimated at JD 250 thousand.</li> </ul>
<b>Main Products</b>	<ul style="list-style-type: none"> <li>• Barley bread.</li> <li>• Soy bread.</li> <li>• Bran Bread (Tannour Bread).</li> <li>• Oat bread.</li> <li>• Crispy bread.</li> </ul>

<b>Company Name</b>	Tannour Al-Dayaa Bakery
<b>Location</b>	Airport Street
<b>General Description</b>	<ul style="list-style-type: none"> <li>• The company was established in Jordan in 2015.</li> <li>• The company has about 15 employees.</li> <li>• The factory's production of healthy bread is estimated at 350 tons per year.</li> <li>• There is no export of factory products.</li> <li>• The investment cost of the factory is estimated at JD 250 thousand.</li> </ul>
<b>Main Products</b>	<ul style="list-style-type: none"> <li>• Barley bread.</li> <li>• Oat bread.</li> <li>• Bran Bread.</li> <li>• Corn Bread.</li> </ul>

<b>Company Name</b>	Tannour Al-Aser Bakery
<b>Location</b>	Al-Bayader
<b>General Description</b>	<ul style="list-style-type: none"> <li>• The plant is still under construction, and is expected to begin production within four months.</li> <li>• The main branch of the factory is in Lebanon.</li> <li>• Healthy bread is imported from the factory in Lebanon and distributed and sold in Jordan.</li> <li>• The import volume of the factory in Lebanon is estimated at about 350 tons per year.</li> </ul>
<b>Main Products</b>	<ul style="list-style-type: none"> <li>• Oat bread.</li> <li>• Brown Tannour Bread.</li> <li>• White Tannour Bread.</li> </ul>

<b>Company Name</b>	Dr. Bashar Al-Eid Clinic
<b>Location</b>	Amman, Al-Balqa, Irbid
<b>General Description</b>	<ul style="list-style-type: none"> <li>• The clinic was founded by Dr. Bashar, who developed an alternative product for industrial sugar from natural herbs, and invented Arabic bread free of carbohydrates.</li> <li>• There are four branches of the clinic in Sweifieh, Jabal Al-Husseini, Al Fuheis and Irbid.</li> <li>• The number of nutritionists in his clinics is about 8.</li> <li>• The clinic has 55 healthy food products of various types of meat, baked goods and sweets.</li> </ul>
<b>Main Products</b>	<ul style="list-style-type: none"> <li>• Bread: Arabic bread, Burger bread, Toast bread and Manakish.</li> <li>• Biscuits: digestive biscuits, biscuit cookies with Chocolate, Belgian biscuits.</li> <li>• Sweets: cream caramel, coconut balls, chocolate, cake, barazek, eastern sweets and Kanafah.</li> <li>• Honey.</li> <li>• Meats such as burgers, sausage and kubbah.</li> <li>• Sweeteners.</li> </ul>

### 3.5 Price Analysis

A field study was conducted on the prices of healthy baked goods in the Kingdom. The consumer price was collected for different types of healthy baked goods such as Tannour Bread, other healthy bread, cakes, Shabura, biscuits and other healthy baked goods available in the Jordanian market.

The table below shows the prices of these healthy baked goods, which were collected through the field study. The price of the healthy Tannour Bread is from JD 1-1.5, according to the producing bakery and to the package weight, while the price of barley cakes is JD 4 per Kg, and as for sweets it costs JD 7-10 per Kg.

**Table 15: Prices of healthy baked goods in the Jordanian market**

Bakery	Type	Weight (g)	Price (JD)
Healthy Reef Bakery	All types of Tannour Bread	510	1.50
	Crispy bread	150	2.00
Tannour Al-Dayaa Bakery	All types of Tannour Bread	300	1.00
Tannour Al-Aser Bakery	All types of Tannour Bread	300	1.00
Other Bakeries	Bran toast Bread	1000	1.75
	Oat bread	200	1.00
	Loaf of oats bread	250	3.00
	Grain Bread	250	0.75
	Barley cakes	1000	4.00
	Corn Cookies	1000	6.00
	Oatmeal Cookies	100	1.00
Healthy and sugar free sweets	1000	10 -7	

Source: Field Surveys

### 3.6 Marketing Strategy

#### Target Market

The project targets the following categories:

- Retailers in the Jordanian market.
- Citizens who care about healthy food.
- Export to Middle East markets.

#### Expected products

Expected project products include:

- Healthy Bread of different types
- Healthy Crackers and Shaborah
- Healthy Biscuits
- Healthy pastries and confectioneries
- etc

#### Expected Prices

- The average selling price for healthy bread in the first year is JD 2.8 per Kg.
- The average selling price for healthy cakes and Shabura in the first year is JD 4.6 per Kg.
- The average selling price of healthy biscuits in the first year is JD 4.0 per Kg.
- The average selling price of sweets in the first year is JD 8.0 per Kg.

#### Promotion

The project's promotional strategy includes:

- A website of project products.
- Brochures about the project.
- Advertisements through websites.
- Advertisements in local newspapers.
- Marketing and promotion of project products through exhibitions.
- Field marketing of project products.

#### Selling

The sales strategy of the project is as follows:

- Selling to retail stores.
- Direct selling to citizens through exhibitions.
- Export to the Middle Eastern markets.

## Services

The project service delivery strategy includes:

- Focusing on the quality materials used in the production of healthy baked goods.
- Maintaining permanent and continuous cleanliness of the factory and storage places.
- Maintaining the cleanliness of used tools, furniture and various facilities and equipment.
- Respecting the rules of health care, cleanliness and public safety.
- Continues maintenance of equipment.
- Commitment to deadlines with customers.
- Credibility when dealing with customers.

### 3.7 The Expected Market Share

The following table shows the market share of the project, according to the following assumptions:

- It is expected to start operation in the proposed project in 2018.
- The growth rate of the market for healthy baked goods was estimated at 7% per year from 2015 to 2018.

The expected market size is as follows:

	2015	2016	2017	2018
Expected market size (ton)	6,079	6,505	6,960	7,447

**Table 16: Market Share of the Project**

Statement	First year	Second year	Third year	Fourth year	Fifth year
Production (tons)	720	756	794	833	875
Expected market size (ton)	7,447	7,968	8,526	9,123	9,761
market share	%10	%9	%9	%9	%9

## 4. Technical Study

### 4.1 The Designed project capacity

The following table shows the designed capacity of the project. The total designed capacity of the project is about 940 tons per year, with a healthy bread production capacity of 650 tons per year, and the other healthy products from sweets, cakes and biscuits with a production capacity of 290 tons per year.

**Table 17: Designed Capacity of the Project**

Statement	Quantity (tons)
Healthy bread	650
Shabura and healthy cakes	130
Healthy Sweets	30
Biscuits	130
<b>Total</b>	<b>940</b>

The following table shows the areas required for the project. In order to reach the designed capacity, it requires the rental of a land with an area of 2,000 m<sup>2</sup>, and the establishment of buildings with an area of 2,000 m<sup>2</sup>.

**Table 18: Areas required for the project**

Item	Unit
Land m <sup>2</sup>	2,000
Buildings m <sup>2</sup>	2,000

### 4.2 The Required Fixed Assets

The following table shows the material resources required for the project.

**Table 19: Material Resources required for the project**

Item	Unit	Price	Value (JD)
Land m <sup>2</sup>	2,000	-	-
Buildings m <sup>2</sup>	2,000	200	400,000
Furniture and fixtures	-	-	30,000
Transportation vehicles	5	20,000	100,000
Information Technology	1	20,000	20,000
The machines and the equipments	5 (Production lines)	100,000	500,000
<b>Total</b>			<b>1,050,000</b>

\* The figures were estimated from the Market Study findings

\*\* The land on which the project will be established will be leased, and the cost of renting is mentioned in the operational costs.

The plant will contain the following production lines and machines for the production of healthy baked goods:

<b>1. Tannour Bread production line</b>	
▪ Oven Feed Screen	▪ Storage tanks
▪ Special oven for Tannour Bread	▪ Kneader machine.
▪ Cooling devices	▪ Dough cutter
▪ Conveyor belts	▪ The primary dough fermentation machine
▪ Packaging machine	▪ Dough roller
<b>2. Baguette Bread production line</b>	
▪ Bread cutting machine	▪ Kneader machine.
▪ Oven with layers	▪ Dough cutter
▪ Cooling devices	▪ The primary dough fermentation machine
▪ Conveyor belts	▪ Dough separator
▪ Packaging machine	▪ Dough roller
<b>3. Biscuit Production Line</b>	
▪ Cooling Machine	▪ Storage tanks
▪ Conveyor belts	▪ Machine for mixing ingredients
▪ Special molds for biscuits	▪ Dough fermentation machine
▪ Packaging machine	▪ Dough forming machine according to mold
	▪ Special ovens
<b>4. Cakes and Shabura production line</b>	
▪ oven	▪ Storage tanks
▪ Cooling Machine	▪ Kneaders
▪ Conveyor belts	▪ Dough Forming Machine
▪ Packaging machine	▪ Dough cutter
	▪ Tank and machine for spraying grains
<b>5. Sweets production line</b>	
▪ Filling and injection machine	▪ Storage tanks
▪ Special ovens	▪ Kneaders
▪ Cooling Machine	▪ Sweets mixer



▪ Conveyor belts	▪ Cutting machine
▪ Packaging machine	▪ Forming Machine
<b>6. Miscellaneous equipment</b>	
▪ Trolleys	▪ Basins
▪ Washing machine for trolleys and trays	▪ Selcon and aluminum trays
▪ Weighing units	▪ Molds in multiple forms

### 4.3 The Required Human Resources

The following table shows the human resources required for the project. The number of employees required is about 46 employees, with total salaries of about JD 280.2 thousand annually; of which JD 176.4 thousand are the total salaries of the operational staff and JD 103.8 thousand of the administrative staff.

**Table 20: Human resources required for the project**

Item	Number of Employees	Salary	Total salary	Operational	Administrative
Director General	1	2,000	24,000	-	24,000
Technical Manager	1	1,000	12,000	-	12,000
Marketing manager	1	1,200	14,400		14,400
Marketing officer	3	500	18,000		18,000
Exhibition manager	3	600	21,600		21,600
nutrition specialist	1	1,200	14,400	14,400	
Quality Specialist	1	1,000	12,000	12,000	
Accountants	1	500	6,000	-	6,000
Collectors	1	350	4,200	-	4,200
Administrators	1	300	3,600	-	3,600
Information Technology	1	700	8,400	8,400	
Engineers	1	800	9,600	9,600	
Technicians	10	500	60,000	60,000	
Workers	20	300	72,000	72,000	
<b>Total</b>	<b>46</b>	<b>-</b>	<b>280,200</b>	<b>176,400</b>	<b>103,800</b>

The following table shows the general job description of the jobs required in the project.

**Table 21: General Job description of the jobs required in the project**

Job	Job Description
Director General	<ul style="list-style-type: none"> <li>▪ Planning, organizing, directing and managing all processes and operations in the factory.</li> <li>▪ Following-up the matters and the performance of all departments in the factory, and giving them the necessary guidance.</li> <li>▪ Following-up the matters and the performance of subsidiary departments and directorates of the factory, and implementing the directives.</li> <li>▪ Developing initiative and processes plans that reduce manufacturing costs and contribute to the company's interests.</li> <li>▪ Identifying the factory needs of human resources, industrial equipment and internal facilities, and following-up their provision.</li> <li>▪ Upgrading the equipment and devices constantly to increase the production capacity of the factory, and developing advanced plans to increase the production and quality standards.</li> <li>▪ Supervising the development and implementation of occupational safety and health plans and procedures, and providing their supplies.</li> <li>▪ Supervising the studies and the collection of statistical and economic data, to assist in the preparation of budget estimates.</li> </ul>
Section Manager (Marketing, technical, production, etc.)	<ul style="list-style-type: none"> <li>▪ Supervising the performance of all processes and operations in the department.</li> <li>▪ Setting the daily and monthly plans for the employees belonging to the department.</li> <li>▪ Reporting and reviewing periodic reports and, submitting them to the Factory Director.</li> <li>▪ Determining the needs of the required human resources to work in the Department.</li> <li>▪ Working on the use of advanced technologies that serve the work and the product.</li> <li>▪ Providing the necessary guidance to employees, and motivate them to work and use initiative.</li> <li>▪ Supervising the application of quality standards and procedures applicable in the Company.</li> </ul>
Supervisor	<ul style="list-style-type: none"> <li>▪ Direct supervision of labor.</li> <li>▪ Ensure daily productivity of workers.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Making sure to maintain the workflow through guidance and oversight.</li> <li>▪ Daily inspection tours.</li> </ul>
Engineer	<ul style="list-style-type: none"> <li>▪ Identifying the needs of raw materials, and preparing orders for the inputs of production processes in cooperation with the competent directorates, and reporting them to the Procurement Directorate.</li> <li>▪ Following-up maintenance work in the production facility by specialists, and reporting on maintenance or replacement of malfunctioning equipment.</li> <li>▪ Reporting all matters relating to the progress of the production process achievements, failures and the reasons.</li> <li>▪ Developing and implementing the production plan regarding quantities and standards, and in scheduled dates.</li> <li>▪ Reducing the amount of damaged products during the production processes, as well as studying the causes and providing the appropriate solutions.</li> <li>▪ Developing regulations and procedures of quality control to examine batches of raw materials arriving to the warehouse.</li> <li>▪ Following up the implementation of the quality policy in factory, and following-up corrective and preventive actions, and reporting them periodically.</li> <li>▪ Supervising the maintenance and repair of machines used in the production process.</li> <li>▪ Documenting the maintenance operations and processes, and opening a special file for each machine individually to see its cost.</li> <li>▪ Supervising the implementation of occupational safety and health for all employees.</li> </ul>
Nutrition specialist	<ul style="list-style-type: none"> <li>▪ Overseeing the development of plans including meals and planning for health habits for businesses, restaurants, schools and others.</li> <li>▪ Community awareness to combat nutrition-related diseases such as obesity, diabetes and angina.</li> <li>▪ Cooperating with health workers whether in the hospital, clinic or health center in treating patients and diagnosing some cases</li> <li>▪ Developing a food and nutrition plan, and supervising the preparation of meals, and preventing and treating diseases by promoting healthy eating and food habits and make amendments to them.</li> <li>▪ Providing consultation to individuals in public health centers,</li> </ul>

	<p>health clinics, factories and others.</p> <ul style="list-style-type: none"> <li>▪ Following-up food services that provide special food.</li> <li>▪ Preparing the diet prescribed by the doctor of foods suitable for the patient</li> </ul>
Marketer	<ul style="list-style-type: none"> <li>▪ Contacting customers through the distribution of publications and advertising in various media.</li> <li>▪ Offering sales and product offers to customers.</li> <li>▪ Measuring customer satisfaction.</li> <li>▪ Building a database of direct and indirect competitors with a statement of strengths and weaknesses and their activities in the market.</li> <li>▪ Conducting periodic analysis for the market and competitors.</li> </ul>
Accountant	<ul style="list-style-type: none"> <li>▪ Preparing financial reports, in addition to updating and maintaining accounting files.</li> <li>▪ Securing funds to pay employees salaries at the end of each month.</li> <li>▪ Following-up payments and accounting receivables.</li> <li>▪ Recording and updating registered fixed assets lists.</li> <li>▪ Following-up accounts and balances in banks.</li> </ul>
Technician	<ul style="list-style-type: none"> <li>▪ Implementing the preventive and corrective electrical maintenance on the machines, equipment and production lines in the factory, in accordance with the approved procedures and instructions.</li> <li>▪ Monitoring the efficiency of machines and equipment in the production section, and informing the production shift supervisor for any misuse of these machines.</li> <li>▪ Diagnosing electrical malfunctions occurring at production lines and machines.</li> <li>▪ Installing electrical installations required for all factory departments and sections.</li> <li>▪ Implementing electrical modifications and installations required on machines and equipments, after being examined and approved by the maintenance engineer.</li> <li>▪ Monitoring the main transformers and circuit breakers, and reading the electrical load, voltages and temperatures according to specific times.</li> <li>▪ Examining the main and sub-Electrical Distribution Panels for all factory buildings and facilities, in accordance with the programs developed to ensure their readiness and effectiveness.</li> </ul>
Worker	<ul style="list-style-type: none"> <li>▪ Preparing the materials used in production.</li> <li>▪ Operating machines and equipments in the factory.</li> </ul>

	<ul style="list-style-type: none"> <li>▪ Monitoring the production line and make the necessary tasks.</li> <li>▪ Applying production and quality plans in all production processes.</li> <li>▪ Applying occupational health and safety standards in the factory.</li> <li>▪ Reporting any malfunction in the machines to the maintenance technician.</li> </ul>
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#### 4.4 Special Requirements

The following table shows the special requirements for the establishment of a food production factory.

**Table 22: Requirements and Specifications**

Statement	Requirements and Specifications
Location	<ul style="list-style-type: none"> <li>▪ The location shall be in an industrial area, or far from residential areas and communities and city centers.</li> <li>▪ The area shall be free from pollution sources, such as unpleasant odors, flies, swamps, dust and other sources, and it shall not be exposed to water flooding.</li> <li>▪ The location shall include basic services such as roads, electricity, water and other.</li> </ul>
Area	<ul style="list-style-type: none"> <li>▪ The land area shall be wide and spacious for the main components of the factory that include the production area, the warehouse, the cafeteria and offices area, and taking into account the possibility of expansion.</li> </ul>
Production Area	<ul style="list-style-type: none"> <li>▪ The Production Area shall be sufficient for the size of the used machines and equipments, so that there is appropriate distance between them and does not obstruct movement.</li> <li>▪ Shall have a streamlined design; allow performing the work easily in regular order in all the different phases of work, from the arrival of raw materials to producing the final product.</li> <li>▪ The floors shall be from watertight, non-absorbent, easy cleaning and non-slippery material. In addition, the materials shall not be affected by industrial detergents, or acids used in cleanliness. Floors shall be flat and free from cracks and holes, and shall be designed to be downwardly inclined toward the drainage hole.</li> <li>▪ The walls shall be painted with oily paint, and shall be smooth and easy to clean.</li> <li>▪ The doors shall be designed of watertight, non-absorbent,</li> </ul>

	<p>smooth materials with self-closing technique.</p> <ul style="list-style-type: none"> <li>▪ The windows shall be designed in a way that prevent the accumulation of dust and dirt, and shall be supplied with suitable wire mesh to prevent the entry of insects and rodents.</li> <li>▪ The lighting shall be appropriate in all the building facilities, as artificial lighting can be used.</li> </ul>
Electrical Installations	<ul style="list-style-type: none"> <li>▪ All electrical connections and installation shall be executed in accordance with the technical standards.</li> </ul>
Water sources	<ul style="list-style-type: none"> <li>▪ The used water shall be from a known and healthy source, proven to be suitable for human consumption based on laboratory tests, and ensuring of water quality on a regular basis.</li> <li>▪ The water tank shall be far from pollution sources. The water shall be taken from the tank through a pipe network to places of use. The water tank shall be cleaned and sterilized on a regular basis.</li> </ul>
Bathrooms	<ul style="list-style-type: none"> <li>▪ Bathrooms shall be provided with ventilation fan and exhaust box.</li> <li>▪ Appropriate number of Bathrooms shall be provided for the number of employees in the factory. Bathrooms shall not be placed directly to preparation and production areas.</li> <li>▪ Bathrooms shall be provided with soap, paper towels or hot air, and the use of towels shall be prohibited.</li> </ul>
Waste and Water Disposal	<ul style="list-style-type: none"> <li>▪ Waste and water are disposed to the sewerage network or to an absorption tank, which is far from the surface drinking water tanks of not less than ten meters, and with half meter less than its level.</li> <li>▪ All drainage holes shall have tightly closed covers, and shall not be left open.</li> </ul>
Equipment	<ul style="list-style-type: none"> <li>▪ All the tools and equipment used in production shall be useable and in good condition, and shall be made from rustproof materials.</li> <li>▪ Providing the appropriate number of refrigerators for food preservation, whether preliminary or final product at the appropriate temperature for cooling or freezing.</li> <li>▪ Ventilation fans shall be available in preparation and production areas in appropriate number and size.</li> <li>▪ Electric shock devices for insects shall be available, in appropriate number and size, and shall be hanged on the production hall walls and not above the production lines.</li> </ul>
Warehouses and Stores	<ul style="list-style-type: none"> <li>▪ Shall be provided with adequate number of metal shelves, as</li> </ul>

	<p>the lower shelf shall be at least 20cm above the earth's surface.</p> <ul style="list-style-type: none"> <li>▪ Food items shall be preserved in a special warehouse at the right temperature, and shall be separate from the other materials warehouse, such as raw materials and cleaning materials and other.</li> <li>▪ The storage and transportation of food shall be carried out under conditions that prevent their contamination, spoilage or containers damage. They shall be stacked in orderly manner to facilitate the monitoring process.</li> <li>▪ Taking into account the absence of moisture sources inside the store, so as not to affect the food items.</li> </ul>
Safety devices	<ul style="list-style-type: none"> <li>▪ Safety requirements shall be in place, according to the Civil Defense instructions.</li> </ul>
Hygiene and Cleanliness	<ul style="list-style-type: none"> <li>▪ Attaching great importance to the hygiene and cleanliness of all factory facilities, using the proper detergents and disinfectants. The cleanliness of the used tools and equipment, and the use of appropriate detergents.</li> <li>▪ Using paper towels to clean the factory tables.</li> <li>▪ Collecting waste in plastic bags or sealed containers.</li> </ul>
Ventilation	<ul style="list-style-type: none"> <li>▪ The factory shall face the wind, so that the ventilation processes run properly.</li> <li>▪ Using ventilation systems such as the closed ventilation system or the exhaust fan system to change the air at the factory, with the control of the heat and moisture as well. In addition, the ventilation systems will reduce the microbial load, and clean the facility atmosphere.</li> </ul>

#### 4.5 The Required Licenses

The following table shows the necessary licenses from various authorities to implement the project.

**Table 23: Licenses Required for the Project**

Statement	Analysis
Company Registration	<ul style="list-style-type: none"> <li>▪ Ministry of Industry and Trade</li> <li>▪ Chamber of Industry</li> </ul>
The Establishment of the Factory	<ul style="list-style-type: none"> <li>▪ Concerned municipality / Concerned Industrial Area / Electricity / Water etc...</li> </ul>
Factory Operation	<ul style="list-style-type: none"> <li>▪ Income and Sales Tax Department</li> <li>▪ Social Security Corporation</li> </ul>

### 4.6 Project Timetable

The following figure shows the timeline to implement the project, which amounts to 16 months, as follows:

Stage	The First Year (Months)												The Second Year (Months)			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Studies	■	■														
Approvals and company registration			■	■												
Site processing and construction					■	■	■	■	■							
Equipment, furnishing and purchase of machinery										■	■	■	■			
Installation and start commissioning														■	■	■
<b>Total Duration</b>	<b>16 months</b>															



## 5. Financial Study

### 5.1 Financial Assumptions

The following table illustrates the financial assumptions of the project.

**Table 24: The Financial Assumptions of the Project**

Item	Assumption
Inflation Rate	3%
Financing Structure	Equity constitutes 75% of the investment and loans constitute 25%
Interest rate	9%
Working Capital	JD 241 thousand
Pre-Operating Expenses	2% of total investment
Tax Rate	20%
exemptions	Fixed assets are exempted from customs and tax exemptions by 40% of the income tax
Cost of raw materials such as healthy flour	JD 650 thousand/ ton at the first year, with annual 3% increase
Cost of additional materials such as salt, milk and sugar	20% of raw materials cost (healthy flour)
Cost of imported ready-made products	60% of imported healthy products revenues
Packaging materials cost	3% of total revenues
Staff Benefits	25% of salaries
Annual Salaries Increase	5% annually
Sales discount for Retails	20% of total sales value
Marketing expenses	3% of total revenues
Distribution expenses	3% of total revenues
Commotions	2% of total revenues
Assets Depreciation Rate	4%-20% of the asset value
Maintenance	JD 20 thousand at the first year, with 5% annual increase
Electricity and water	4% of total revenues
Accounts Receivable	2 months of total revenues
Inventory	3 months of raw materials cost
Dividends	70% of profit
Reserves	30% of profit

## 5.2 Investment Cost

The project's Investment cost is estimated at JD 1.3 million distributed among fixed assets of JD 1 million, working capital and pre-operating expenses totaled of JD 266 thousand.

The following table shows the project's Investment cost.

**Table 25: the project's investment cost**

Item	Value (in thousand JD)
Fixed assets	1,050
Pre-operating expenses	26
Working capital	241
<b>Total</b>	<b>1,318</b>

## 5.3 Financing

The project will be financed by the partners' shares (shareholders) in the company by 75% which is estimated at about JD 988 thousand, while the other 25% of the project investment cost will be financed through bank loans of about JD 329 thousand.

The following table shows the financing schedule for to the implementation of the project, where:

- The interest rate is 9%.
- The loan will be paid during 4 years.

**Table 26: Project financing schedule**

Item	Value (in thousand JD)	%
Equity	988.2	%75
Loan	329.4	%25
<b>Total</b>	<b>1,318</b>	<b>100%</b>

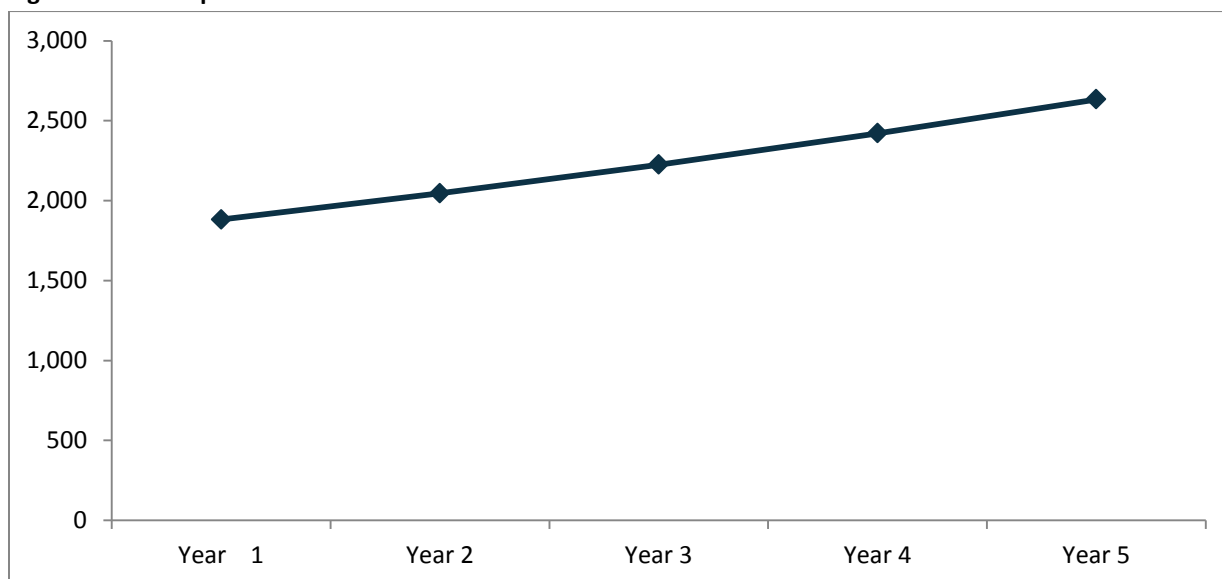
## 5.4 Revenues

The following table shows the total revenues of the project, where it is noted that the revenues in the first year amounts to about JD 1.9 million, and increased to reach up to JD 2.6 million in the fifth year, due to the increasing sales.

**Table 27: The Expected Revenues**

Statement	Year 1	Year 2	Year 3	Year 4	Year 5
Healthy bread – ton	500	525	551	579	608
Shabura and healthy cakes - ton	100	105	110	116	122
Healthy Sweets – ton	20	21	22	23	24
Healthy Biscuits - ton	100	105	110	116	122
Bread price (JD/ ton)	2,800	2,884	2,971	3,060	3,151
Shabura price (JD/ ton)	4,600	4,830	5,072	5,325	5,591
Healthy Sweets price (JD/ ton)	8,000	8,400	8,820	9,261	9,724
Biscuits price (JD/ ton)	4,000	4,200	4,410	4,631	4,862
Sales (JD)	1,960,000	2,131,500	2,318,183	2,521,409	2,742,663
Sales of imported healthy products (JD)	392,000	426,300	463,637	504,282	548,533
Sales discount for retailers (JD)	(470,400)	(511,560)	(556,364)	(605,138)	(658,239)
<b>Total Revenues – Thousand JD</b>	<b>1,882</b>	<b>2,046</b>	<b>2,225</b>	<b>2,421</b>	<b>2,633</b>

**Figure 8: Total expected revenues**



## 5.5 The Projected Costs

### Operating Costs

The following table shows the project's operating costs according to the previous assumption over five years. The cost of raw materials such as healthy flour in Year 1 amounted to JD 468,000 which increase to reach JD 640,000 in Year 5, while the cost of additional materials such as salt, milk, sugar and others in year 1 amounted to JD 94,000 which increase to reach JD 128,000 in Year 5. Moreover, the Packaging materials cost amount to JD 56,000 in Year 1 which increases to JD 79,000 in the year 5.

**Table 28: Operating Costs**

Operating Costs (in thousand JD)					
Item	Year 1	Year 2	Year 3	Year 4	Year 5
Raw materials (healthy flour)	468	506	547	592	640
additional materials such as salt, milk and sugar	94	101	109	118	128
Packaging materials	56	61	67	73	79
imported ready-made products cost	235	256	278	303	329
Salaries	176	185	194	204	214
Staff Benefits	44	46	49	51	54
IT Cost	3	3	3	3	4
Depreciation	80	80	80	80	80
Maintenance	20	21	22	23	24
Electricity, water cost	75	82	89	97	105
Industrial land rental cost	10	10	10	10	10
Others	5	5	6	6	6
<b>Total</b>	<b>1,267</b>	<b>1,357</b>	<b>1,455</b>	<b>1,560</b>	<b>1,674</b>

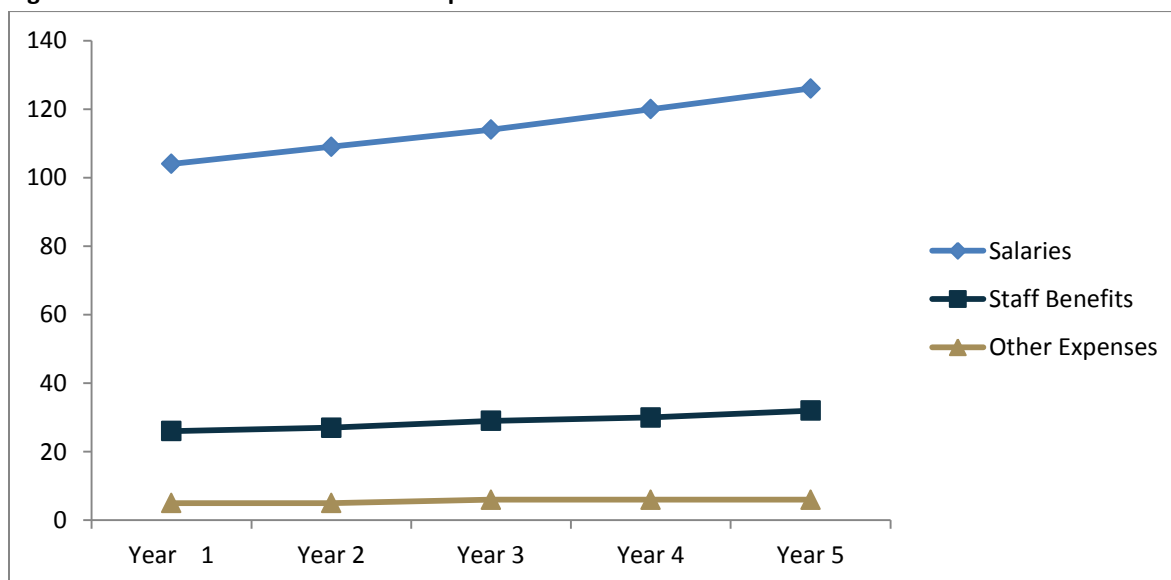
### Administrative Expenses

The following table shows the projected administrative expenses of the project. Employees' salaries reach JD 104 thousand in the first year and increase to JD 126 thousand in the fifth year. The staff benefits are about JD 26 thousand in the first year and increase to reach JD 32 thousand in the fifth year.

**Table 29: General and Administrative Expenses**

General and Administrative Expenses (in thousand JD)					
Item	Year 1	Year 2	Year 3	Year 4	Year 5
Salaries	104	109	114	120	126
Staff Benefits	26	27	29	30	32
Stationery	3	3	3	3	4
Hospitality	3	3	3	3	4
Professional Fees	2	2	2	2	2
Other Expenses	5	5	6	6	6
Amortization	26	-	-	-	-
<b>Total</b>	<b>169</b>	<b>150</b>	<b>157</b>	<b>165</b>	<b>174</b>

**Figure 9: General and Administrative Expenses**



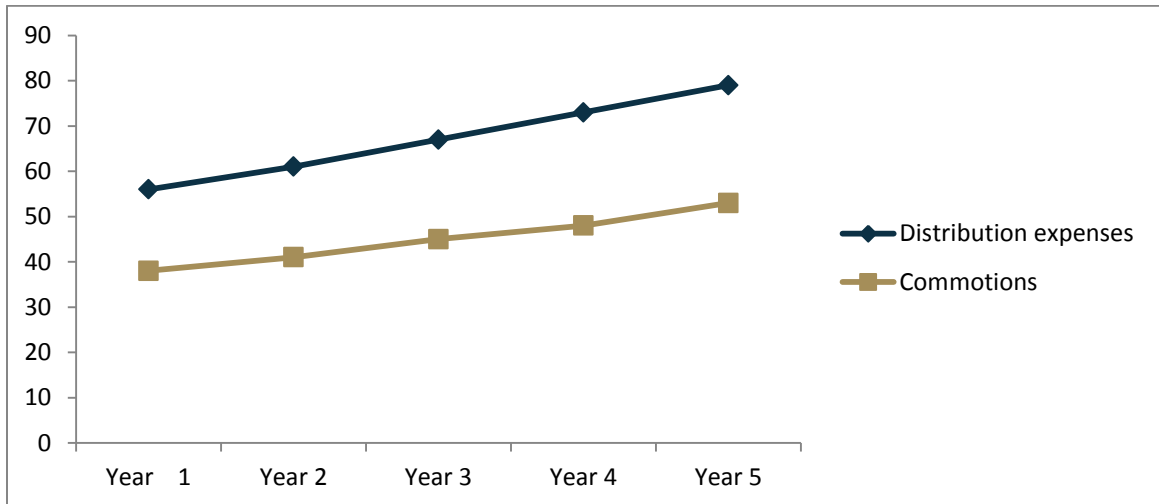
### Marketing Expenses

The following table shows the marketing expenses of the project. Where the exhibition rents cost is JD 50 thousand, marketing expenses reach JD 56 thousand in the first year and increase to JD 79 thousand in the fifth year. The commotions are about JD 38 thousand in the first year and increase to reach JD 53 thousand in the fifth year.

**Table 30: marketing Expenses**

marketing Expenses (in thousand JD)					
Item	Year 1	Year 2	Year 3	Year 4	Year 5
Exhibition rents	50	50	50	50	50
Marketing expenses	56	61	67	73	79
Distribution expenses	56	61	67	73	79
Commotions	38	41	45	48	53
<b>Total</b>	<b>201</b>	<b>214</b>	<b>228</b>	<b>244</b>	<b>261</b>

**Figure 10: General and Administrative Expenses**



## 5.6 Projected Financial Statements

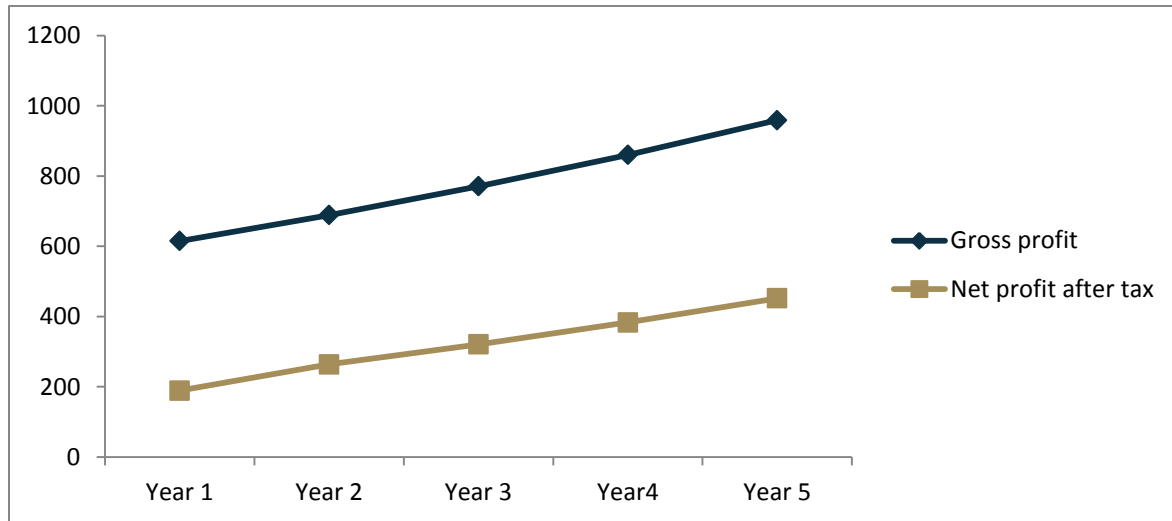
### Income Statement

The following table shows the projected income statement of the project. It indicates that gross profit will increase from JD 615 thousand in the first year to JD 959 thousand in the fifth year. The net profit after tax will increase from JD 189 thousand in the second year to JD 452 thousand in the fifth year.

**Table 31: The Projected Income Statement**

Income Statement (in thousand JD)					
Item	Year 1	Year 2	Year 3	Year4	Year 5
Revenues	1,882	2,046	2,225	2,421	2,633
Operating costs (cost of sales)	1,267	1,357	1,455	1,560	1,674
Gross profit	615	689	771	860	959
Marketing expenses	201	214	228	244	261
Administrative expenses	169	150	157	165	174
Net profit	245	325	385	452	525
financial expenses	30	25	21	16	12
Net profit before tax	215	300	365	435	513
Tax	26	36	44	52	62
<b>Net profit after tax</b>	<b>189</b>	<b>264</b>	<b>321</b>	<b>383</b>	<b>452</b>

**Figure 11: Projected Income Statement**



### Projected Balance Sheet

The following table shows the projected balance sheet of the project during the first five years. It indicates that total assets will decrease from JD 1.3 million in the year of incorporation to about JD 1.8 million in the fifth year. The Total liabilities will decrease from JD 406 thousand in the first year to about JD 167 thousand in the fifth year. Moreover, the Shareholders' Equity will increase from JD 988 thousand in the year of incorporation to reach JD 1.6 million in the fifth year.

**Table 32: Projected Balance Sheet**

Projected Balance Sheet (in thousand JD)						
Statement	Year of incorporation	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Assets</b>						
Cash	241	161	241	335	446	494
Receivables	-	316	344	374	407	442
Inventory	-	117	127	137	148	160
Pre- Paid Expenses	-	20	21	22	23	24
<b>Total Current Assets</b>	<b>241</b>	<b>614</b>	<b>732</b>	<b>868</b>	<b>1,024</b>	<b>1,121</b>
Fixed Assets	1,076	1,076	1,076	1,076	1,076	1,076
Cumulative Depreciation	-	106	186	266	346	426
<b>Net Fixed Assets</b>	<b>1,076</b>	<b>970</b>	<b>890</b>	<b>810</b>	<b>730</b>	<b>650</b>
<b>Total Assets</b>	<b>1,318</b>	<b>1,584</b>	<b>1,622</b>	<b>1,678</b>	<b>1,754</b>	<b>1,771</b>
<b>Shareholders Equity and Liabilities</b>						
Accrued Expenses and Payables	-	127	136	145	156	167
Long Term Loans	329	279	229	179	129	-
<b>Total Liabilities</b>	<b>-</b>	<b>406</b>	<b>365</b>	<b>325</b>	<b>285</b>	<b>167</b>
Shareholders Contributions	988	988	988	988	988	988
Retained Earnings	-	189	269	365	480	615
<b>Shareholders' Equity</b>	<b>988</b>	<b>1,178</b>	<b>1,257</b>	<b>1,353</b>	<b>1,468</b>	<b>1,604</b>
<b>Shareholders Equity and Liabilities</b>	<b>1,318</b>	<b>1,584</b>	<b>1,622</b>	<b>1,678</b>	<b>1,754</b>	<b>1,771</b>



### Cash Flow Statement

The following table shows the projected cash flow statement of the project during the first five years. It indicates that the cash flow from operation will increase from JD 315 thousand in the second year to JD 494 thousand in the fifth year; while the Cash at the ending period will increase from JD 241 thousand in the year of incorporation to JD 494 thousand in the fifth year.

**Table 33: The Expected Cash Flows Statement**

Cash Flow Statement (in thousand JD)						
Statement	Year of incorporation	Year 1	Year 2	Year 3	Year 4	Year 5
<b>Operation Activities</b>						
Net Profit	-	189	264	321	383	452
Depreciation	-	106	80	80	80	80
Change In Working Capital	-	(326)	(29)	(32)	(35)	(38)
Cash Flow From Operation	-	(31)	315	369	429	494
<b>Investing Activities</b>						
Fixed Assets	(1,076)	-	-	-	-	-
Cash From Investing Activities	(1,076)	-	-	-	-	-
<b>Financing Activities</b>						
Capital (Equity)	988	-				
Loan	329	(50)	(50)	(50)	(50)	(129)
Dividends		-	(185)	(225)	(268)	(316)
Cash Flow From Financing Activities	1,318	(50)	(235)	(275)	(318)	(446)
Net Cash Flow	241	(81)	80	95	110	49
Cash At The Beginning Period	0	241	161	241	335	446
Cash At The Ending Period	241	161	241	335	446	494

## 5.7 Financial, Economic and Social Analysis

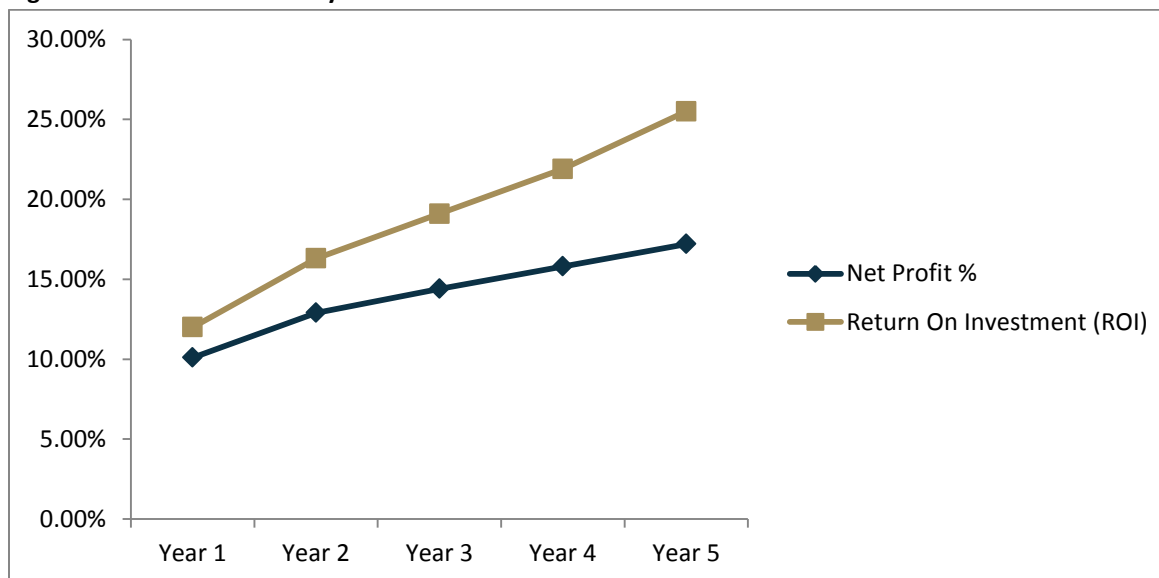
### Financial Analysis

The following table shows the financial analysis of the project. It indicates that the net profit ratio will increase from 10.1% in the second year to 17.2% in the fifth year, and the return on investment will increase from 12% in the first year to 25.5% in the fifth year.

**Table 34: Financial Analysis**

Financial Analysis (In Thousand JD)					
Item	Year 1	Year 2	Year 3	Year 4	Year 5
Assets	1,584	1,622	1,678	1,754	1,771
Revenues	1,882	2,046	2,225	2,421	2,633
Profits	189	264	321	383	452
Capital (Equity)	988	988	988	988	988
Net Profit %	10.1%	12.9%	14.4%	15.8%	17.2%
Return On Investment (ROI)	12.0%	16.3%	19.1%	21.9%	25.5%
Return On Capital (ROC)	19.2%	26.7%	32.5%	38.8%	45.7%
Net Profit On Revenues	10.1%	12.9%	14.4%	15.8%	17.2%
Assets Turnover (Time)	1.19	1.26	1.33	1.38	0.36

**Figure 12: The Financial Analysis**



### Economic Analysis

The following table shows the economic analysis of the project during the first five years, we conclude that:

- The Internal rate of return is 23%. It exceeded six times the return on assets, which means the economic feasibility of the project
- The present value of the project reached about JD 1.9 million. It exceeds the net present value with JD 1.3 million, which means the economic feasibility of the project.
- The profitability index of the project reached 1.42 times, which means that the expected value of the project will increase by one time and half the investment value, which proves that the project is feasible.
- The project payback period is 4.5 years.

**Table 35: the Economic Analysis**

Economic Analysis (in Thousand JD)						
Statement	Year of incorporation	Year 1	Year 2	Year 3	Year 4	Year 5
Net cash flow from operating and investing activities	(1,318)	(31)	315	369	429	494
terminal value	-	-	-	-	-	1,604
Net Cash flow	(1,318)	(31)	315	369	429	2,098
Internal Rate of Return (IRR)	23%					
present Value	1,877					
Net present value	559					
Profitability Index (Time)	1.42					
Payback period (Year)	4.50					

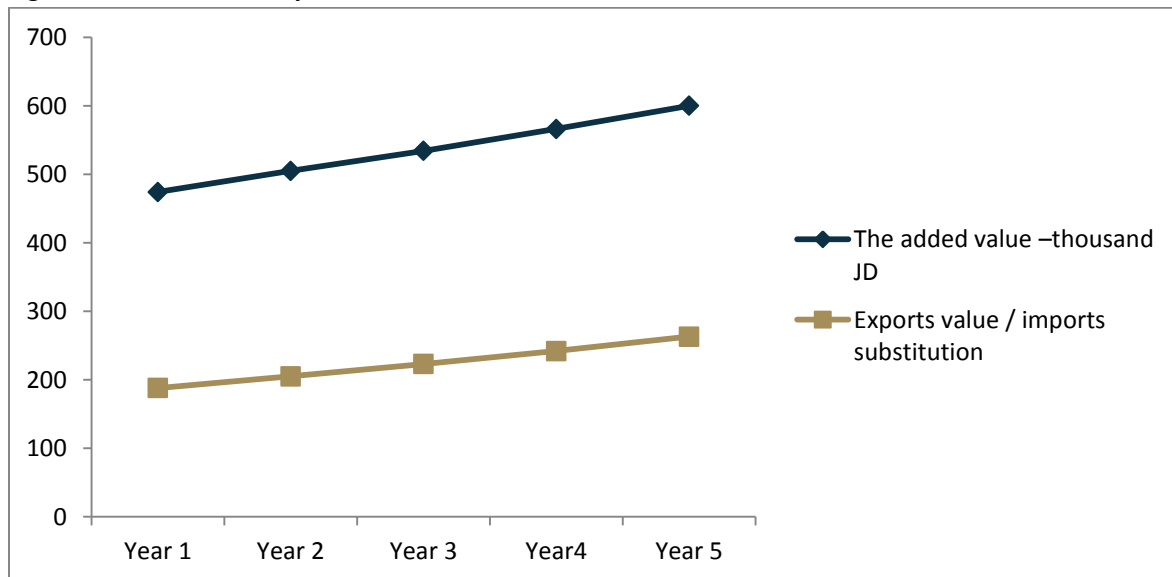
### Social Analysis

The following table shows the social analysis of the project. It is noticed that the number of staff required for the project will increase from 46 employees in the first year to 52 employees in the fifth year, and all employees are with Jordanian nationality. The added value of the project will also increase from JD 474 thousand in the first year to JD 600 thousand in the fifth year.

**Table 36: the Social Analysis of the Project**

Social Analysis					
Statement	Year 1	Year 2	Year 3	Year4	Year 5
Number of Employees	46	47	49	50	52
Jordanian employees	46	47	49	50	52
The added value –thousand JD	474	505	534	566	600
Income tax –thousand JD	26	36	44	52	62
sales tax value –thousand JD	301	327	356	387	421
Exports value / imports substitution	188	205	223	242	263

**Figure 13: The Social Analysis**



## 6. Risk and Sensitivity Analysis

### 6.1 Risk Analysis

The following table shows the risk matrix analysis that may face the project.

**Table 37: Project Risk Matrix**

Risks	Type of Risks	Risk Assessment
<b>Financial Risks</b>	<ul style="list-style-type: none"> <li>▪ <b>Credit Risk</b> Credit risk represents the risk of the company's financial loss as a result of the customer's default of the contractual obligation or that of the party dealing with the company through a financial instrument. These risks are mainly caused by trade receivables and others.</li> <li>▪ <b>Liquidity Risk</b> Liquidity risk is the risk resulting from the company's inability to meet its financial obligations at time. The company's liquidity management is to ensure as much as possible that the company always maintain enough liquidity to meet its obligations as they become due and payable in normal and emergency conditions without incurring unacceptable losses or risks that affect the company's reputation.</li> <li>▪ <b>risk of currency fluctuation</b> Currency risk is the risk of the fluctuation of the value of</li> </ul>	<ul style="list-style-type: none"> <li>▪ The financial risks that may face the company are moderate, because the company payments will depend on monthly bases, Which means that some retailers will not pay</li> <li>▪ There is a risk of currency exchange, because the company sales and purchases will be exported</li> <li>▪ There is no risk of inflation because the company's pricing is based on a periodic basis</li> </ul>

Risks	Type of Risks	Risk Assessment
	<p>financial instrument, due to fluctuations in foreign currency exchange rates.</p> <ul style="list-style-type: none"> <li>▪ <b>inflation risk</b> It is the risk associated with the possibility that the inflation or the rise in the cost of living might lead to the decrease the real value of the investment.</li> </ul>	
<p><b>Business risk (sector risk)</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Strategic Risk</b> It is the risk resulting from taking bad decisions by the company's management, or implementing the decisions in a wrong way, or not taking the decisions at the right time; which leads to losses or causes loss of alternative opportunities.</li> <li>▪ <b>Legal and Regulatory Risks</b> These risks are reflected as a result of non-compliance with laws, guidelines and instructions governing the work. Legal risks are caused by the company's break of the laws governing the work in the state in which the company operates. While regulatory risks arise from the company's violation of laws and standards issued by the regulatory authorities.</li> <li>▪ <b>Reputation Risk</b> Reputation risk arises from influential negative public</li> </ul>	<ul style="list-style-type: none"> <li>▪ The risks are considered low before the company's establishment, because there is no difficulty in getting the approval of the official authorities</li> <li>▪ Reputational risk is very high, as the company deals with very sensitive issues such as food</li> <li>▪ Market risk in the short term will be moderate because of the competition from other companies in the governorate</li> <li>▪ Importing from the external markets risks are low, Due to the presence of an imported product in the Jordanian market</li> </ul>

Risks	Type of Risks	Risk Assessment
	<p>views which result in great losses of customers or money. It includes the actions of the company's management or its employees which project a negative image of the company, its performance and its relationships with customers and other stakeholders. Reputation risk also results from circulating rumors about the company and its activities.</p> <ul style="list-style-type: none"> <li>▪ <b>Competition Risk</b> Competition risk results from domestic and external competitors and reduces sales and profits.</li> </ul>	
<p><b>Operational Risk</b></p>	<p>Operational risk involves losses resulting from the failure of internal operations, human resources and systems. It includes:</p> <ul style="list-style-type: none"> <li>▪ <b>IT Risks</b> They are losses arising from downtime or systems failure due to the infrastructure, information technology, or the lack of systems, and any failure or malfunction in the systems. They include: the crash of computer systems, breakdowns in communication systems, programming errors, computer viruses and opportunities losses due to breakdown.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Operational risks are moderate, Where the project is to buy materials, especially flour, from foreign markets in hard currency</li> <li>▪ Information technology risks are low</li> <li>▪ Human resources risks are low</li> </ul>

Risks	Type of Risks	Risk Assessment
	<ul style="list-style-type: none"> <li>▪ <b>Human Resources Risk</b> Losses caused by employees or related to them (intentionally or unintentionally). It also includes acts that are intended as methods of cheating, abusing property or circumvent the law, regulations or company policy by officials or employees, as well as losses arising from the relationship with the customer, shareholders, regulators and any third party.</li> </ul>	
<b>State Risk</b>	State Risk includes politicians' interference, civil unrest, wars, financial and monetary policies, and high level of debts.	<ul style="list-style-type: none"> <li>▪ State Risk is considered to be low, due to security and political stability; international reports indicate that State Risk is low both in medium and long terms</li> </ul>



## 6.2 Sensitivity Analysis

### First: Increase of Investment Cost By 10%

The following table shows the results of the sensitivity analysis when investment cost increases by 10%.

**Table 38: Investment Increase by 10%**

Index	Base	Impact	Change
Internal Rate of Return (IRR)	%23	%21	%2
The Present Value at a discount rate of 13% (in Thousand JD)	1,877	1,918	-41.5
Net Present Value at a discount rate of 13% (in Thousand JD)	559	466	93.4
Profitability Index (Time)	1.4	1.3	0.1
Payback period (Year)	4.5	4.8	-0.3
The Net Profit Ratio – an average of 5 years	%14.1	%13.9	%0.2
Return on Investment - an average of 5 years	%18.9	%17.5	%1.4
Return on Capital – an average of 5 years	%32.6	%29.3	%3.3
Net Profit On Revenues - an average of 5 years	%14.1	%13.9	%0.2
Assets Turnover (Time) – an average of 5 years	1.1	1.0	0.1
The added value - an average of 5 years (in thousand JD)	536	535	1
income tax - an average of 5 (in thousand JD)	44	43	0.5
sales tax - an average of 5 years (in thousand JD)	359	359	0

The above analysis refers to the feasibility of investment in the project, in light of the high cost of the total investment of the project, which increased by 10%. It is noted that:

- The internal rate of return reaches 21%, which is considered high for investment purposes
- The new payback period is 4.8 years, and it is reasonable for recovery purposes
- The return on capital is 29.3%, which is suitable for investment purposes

### Second: Reducing Revenues by 10%

The following table shows the results of the sensitivity analysis when reducing revenues by 10%.

**Table 39: Reducing Revenues 10%**

Index	Base	Impact	Change
Internal Rate of Return (IRR)	%23	%10	%13.2
The Present Value at a discount rate of 13% (in Thousand JD)	1,877	1,143	734
Net Present Value at a discount rate of 13% (in Thousand JD)	559	-172	731
Profitability Index (Time)	1.4	0.9	1
Payback period (Year)	4.5	6.6	-2.10
The Net Profit Ratio – an average of 5 years	%14.1	%7.3	%7
Return on Investment - an average of 5 years	%18.9	%10.7	%8
Return on Capital – an average of 5 years	%32.6	%15.6	%17
Net Profit On Revenues - an average of 5 years	%14.1	%7.3	%7
Assets Turnover (Time) – an average of 5 years	1.1	1.1	-
The added value - an average of 5 years (in thousand JD)	536	508	27
income tax - an average of 5 (in thousand JD)	44	21	23
sales tax - an average of 5 years (in thousand JD)	359	323	36

The above analysis shows the low sensitivity of the project in case of reducing the revenues or demand by 10%. It indicates that:

- The internal rate of return is 10%, which is considered low for investment purposes
- The new payback period is 6.6 years, and it is reasonable for recovery purposes
- The return on capital reaches 15.6%, which is suitable for investment purposes

### Third: Increasing the Operating Costs by 10%

The following table shows the results of the sensitivity analysis when increasing the operating costs by 10%.

**Table 40: Increasing the Operating Costs by 10%**

Index	Base	Impact	Change
Internal Rate of Return (IRR)	%23	%12	%10.6
The Present Value at a discount rate of 13% (in Thousand JD)	1,877	1,305	572
Net Present Value at a discount rate of 13% (in Thousand JD)	559	-34	593
Profitability Index (Time)	1.4	1.0	0
Payback period (Year)	4.5	6.0	-1.5
The Net Profit Ratio – an average of 5 years	%14.1	%8.3	%5.8
Return on Investment - an average of 5 years	%18.9	%12.6	%6.3
Return on Capital – an average of 5 years	%32.6	%19.2	13.4%
Net Profit On Revenues - an average of 5 years	%14.1	%8.3	%5.8
Assets Turnover (Time) – an average of 5 years	1.1	1.2	-0.1
The added value - an average of 5 years (in thousand JD)	536	518	18
income tax - an average of 5 (in thousand JD)	44	26	18
sales tax - an average of 5 years (in thousand JD)	359	359	0

The above analysis shows the feasibility of the project in light of increasing the operating costs of the project by 10%. It indicates that:

- The internal rate of return is 12%, which is considered suitable for investment purposes
- The new payback period is 6 years, and it is reasonable for recovery purposes
- The return on capital is 19.2%, which is suitable for investment purposes