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LABOR FORCE PROFILE OF IRBID DEVELOPMENT AREA

FINAL REPORT

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LABOR FORCE PROFILE OF IRBID DEVELOPMENT AREA

FINAL REPORT

USAID JORDAN ECONOMIC DEVELOPMENT PROGRAM

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Acronyms

DZC	Development Zones Commission
IDA	Irbid Development Area
SABEQ	USAID Jordan Economic Development Program
DOS	Department of Statistics
NCHRD	National Center for Human Resources Development
MOHESR	Ministry of Higher Education and Scientific Research
MOE	Ministry of Education
MOH	Ministry of Health
MOL	Ministry of Labor
ICT	Information and Communication Technology
GSC	General Secondary Certificate
B.Sc	Bachelor of Science
MA	Masters
PhD	Doctorate
QIZ	Qualified Industrial Zone

EXECUTIVE SUMMARY

The labor force profile study for Irbid Development Area aims at identifying the labor demand by the private sector firms in the Area, as well as, the labor supply in Irbid Governorate, in terms of qualifications, training, available skills, previous experience, job preferences, etc. The results of the labor supply and labor demand analysis will reveal important information about the level of match and the gaps between what is needed by the private sector and what workforce is available in the surrounding area. Those results are expected to guide the Development Company and the DZC in the decisions that they should make to bridge the gap between the demand and supply and thus increase the chances for Jordanians in Irbid Governorate to obtain jobs in the Development Area.

The methodology used to gather information on the labor demand consisted of a survey tool that was designed to collect data from investors in the Development Area, in addition to projections and estimations of the needed jobs based on the expected needs of the industries/sectors that are expected to be present at the Development Area.

As per the request of the MDC, and in order to obtain information on the labor supply, the Consultants relied on secondary data published by official bodies, such as the Department of Statistics, chambers, ministries, universities, community colleges, and training centers. This makes this study different from other labor force profile studies supported by SABEQ, which use a survey tool to collect data from a sample of the workforce in the studied area.

The study concluded that there is a high match between the labor supply and demand in all fields and areas chosen by IDA. This fact applies for all targeted sectors of activity including information technology, PBOs, healthcare services, business support services and education services due to the abundance of available graduates in all relevant fields of specializations. For the hotel project, the analysis shows that there is a gap in the supply due to limited graduates and workforce specialized in hospitality and tourism in Irbid.

1. INTRODUCTION

The Labor Force Supply Study measures one side of the labor market equation. This study is usually divided into two parts:

- Secondary data: available at officially recognized sources in the form of annual statistics.
- Primary data: collected through a structured field survey of a sample of the target segment (workforce) using a special survey tool (questionnaire).

On the other hand, Labor Force Demand Study aims at assessing the quantity and quality of labor required by the employers and enterprises at a given geographical area. The approach used to prepare the demand profile includes a process of identifying, contacting and visiting representatives of the economic sectors enterprises within the area, in order to collect data about their human resources needs and projections, by means of structured interview and data request sheet.

The IDA requested SABEQ support in carrying out the labor force supply and demand study to produce the labor profile. The rationale behind identifying both profiles is to match labor supply with demand, and detect gaps in the labor market. Since IDA was established to serve Irbid's population mainly, the labor force supply study focused on the statistics of potential workforce working and residing in Irbid.

IDA developer will use the results of the Labor Force Profile to take action and create initiatives that would promote the recruitment of unemployed workforce by existing and potential investors in the Area.

2. OBJECTIVES

The main objective of the Labor Force Supply and Demand Study for IDA is to describe the main aspects of labor force in Irbid governorate in order to compare it with the labor force demand as expressed by potential investors. The overall objective of this study is to develop a comprehensive labor profile database of Irbid governorate. Another objective is to provide specific updated information about the labor force in Irbid, in order to use it when facilitating the recruitment efforts of potential investors interested in IDA.

3. METHODOLOGY AND TIMEFRAME

As per the request of IDA, the labor force supply study approach is based on collection of secondary data (statistics) about labor and workforce in Irbid, in order to extract useful indicators. Upon completion of the secondary data collection, the profile status shall be evaluated to decide whether there is a need for further research or survey. The methodology of the study includes the following:

1. Hold a kick off meeting with IDA Company to explain the methodology and coordinate efforts.
2. Identify a set of indicators that reflect the profile of the workforce supply in Irbid.
3. Identify potential sources for the secondary data and statistics, which fit the selected indicators.
4. Prepare and send a request for information targeting the identified sources and explaining the required data/measurement and specifying the time series (last 3 years).
5. Follow up with contact persons to collect the data. Hold meetings with responsible persons at different institutions and organizations to discuss and explain the requested data. Prepare and submit status report.
6. Review collected data and ask for details (if needed).
7. Examine and classify the collected data, and then perform data entry.
8. analysis of the collected data and preparation of the labor force supply indicators.
9. Report and present the results to stakeholders.

The methodology of labor demand study is based on the following steps:

1. Hold a kick off meeting for DZC and IDA Company to explain the methodology and coordinate efforts.
2. Identify target segment, which included main economic sectors and activities expected in IDA. List of investors was shared by IDA company upon consultants' request.
3. Customize a survey tool (questionnaire) for the Labor Demand Survey; this was tested and finalized in the form of a data sheet (Excel) based on the survey tool developed and used in other development areas previously. The sheet was categorized with the following topics: basic information of the company, labor demand characteristics, labor demand factors and human resources planning. The survey tool was further customized to suit the nature of planned investments in the IDA.
4. Implement the labor demand survey by contacting and interviewing key personnel (human resources managers, project managers) at the potential companies of IDA. Field visits were conducted to the potential investment companies. The interviews focused on completing the survey tool with current and future labor needs of the company, and the aspects of the available positions and jobs such as required qualifications, skill level, benefits and salary.
5. Review and improvement of collected data to control the quality of information.
6. Analyze the collected data and prepare the labor force demand profile. The profile is a set of indicators representing the estimated labor demand of investments in the IDA as expressed by the companies themselves.
7. Presentation of results to DZC and IDA for discussion and approval.

The timeframe of the labor force supply and demand study is illustrated in table (1).

Table 1: IDA Labor Study timeframe (weeks)

Stage/Task	November 2009				December 2009				January 2010				February 2010			
	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd	4 th	1 st	2 nd	3 rd	4 th
Kick off and preparations																
List of indicators for supply study																
Request of information																
Follow up to collect data and status report																
Supply data handling and analysis																
Customize demand study tool																
Contact and visit investors																
Collect and document demand																
Demand data analysis																
Reporting and Presentation																

LIST OF REQUESTED LABOR SUPPLY DATA AND POSSIBLE SOURCES

IDA specified certain indicators to collect data about labor supply in Irbid. The following table illustrates the requested data from possible sources (statistics of the last three years):

Table 2: Requested labor force data and possible sources

Table 2	
Requested labor force data and possible sources	
Required information/indicator	Possible source (institution/entity)
Population of Irbid (total and by gender and age group).	Department of Statistics (DOS)
Unemployment rate in Irbid (total and by gender and age group).	Department of Statistics (DOS)
Percentage of workforce and economically active of the population of Irbid (by gender, age group, and academic qualifications and specialization).	Department of Statistics (DOS)
Number of unemployed in Irbid by age group, gender, degree, specialization, experience.	Department of Statistics (DOS)
Number of university graduates in Irbid according to degree and specialization.	MOHESR Universities in Irbid
Number and/or percentage of university graduates in Irbid who are economically active	MOHESR Universities in Irbid DOS
Percentage of university graduates residing in Irbid from the total number of graduates by gender and age group.	Universities
University graduates residing in Irbid according to economic activity	Universities

and academic specialization	DOS
Number of universities faculty in Irbid according to specialization.	MOHESR Universities in Irbid
Number of community colleges graduates in Irbid according to specialization Through the last 5 years	MOHESR Colleges
Percentage of community college graduates residing in Irbid by gender, age group and economic activity	MOHESR Colleges
Number of vocational training graduates in Irbid according to gender and occupation	MOL Vocational Training Corporation / Centers in Irbid
Percentage of vocational training graduates residing in Irbid by gender, age group and occupation	MOL Vocational Training Corporation / Centers in Irbid
Number of IT teachers in Irbid public and private schools by gender	MOE DOS
Number of IT employees and non-IT employees within companies in Irbid by gender, age group and occupation.	DOS Ministry of Industry and Trade (MIT) Chambers of Industry and Commerce MOL Ministry of ICT
Number of Medical and Healthcare staff in Irbid according to degree, specialization, gender and age group	MOH DOS Hospitals and healthcare centers in Irbid
Number of Telecom staff in Irbid according to specialization, degree, gender and age group	Ministry of ICT Telecommunications Regulatory Commission Telecom companies
Number of Banking staff in Irbid according to specialization, degree, gender and age group	DOS Central Bank of Jordan Association of Banks in Jordan Chamber of Commerce
Number of Insurance/Brokerage staff in Irbid according to specialization, degree, gender and age group	DOS Central Bank of Jordan Insurance Commission Federation of Insurance Companies Chamber of Commerce
Number of certified accountants/auditors in Irbid by gender and age group	DOS Jordanian Certified Accountants/Auditors Association
Number of school teachers in Irbid by specialization and stream, gender and age group	MOE DOS
Number of R&D staff in Irbid universities and companies by gender, age group, degree and specialization	MOHESR Higher Council for Science and Technology Universities in Irbid
Average salary of employee according to sector, profession (the above mentioned) and years of experience	Ministries of Labor, Health, Education...etc. DOS Chambers of Industry and Commerce
Vacant jobs in Irbid	MOL Chambers of Industry and Commerce.

4. FINDINGS

5. LABOR SUPPLY PROFILE

The collected data complied with the requested indicators, which gives an adequate perception about the situation of labor supply and workforce in Irbid. The main available indicators include:

POPULATION, EMPLOYMENT, UNEMPLOYMENT AND ECONOMIC ACTIVITY

Total population of irbid governorate

Table 3: Total population of Irbid

Table 3			
Irbid's Population by Gender (2006-2008)			
Population	2006	2007	2008
Male	510500	521700	533200
Female	486300	487000	508100
Total	996800	1018700	1041300

(Source: Department of Statistics)

Irbid population have increased by 2% in the past 3 years, the population have increased to reach 1,041,300 in the year 2008. The growth in population is due to the natural growth of population. Irbid is considered the second largest population after Amman, which indicates the abundance of various levels and qualifications of workforce.

Population by age group

Table 4: Irbid's population (%) distributed by age groups

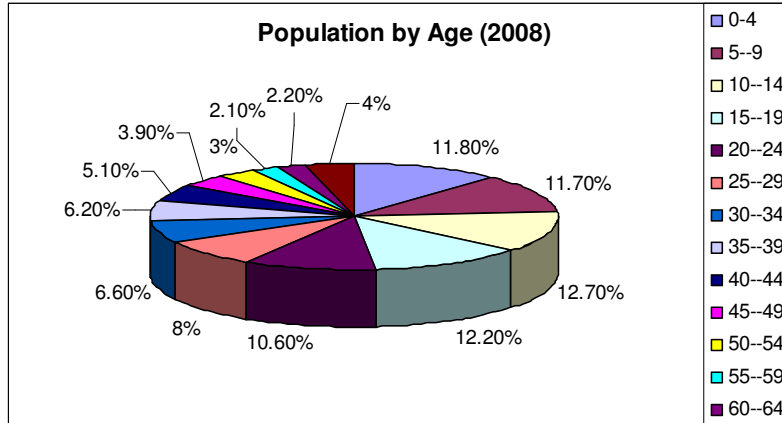
Table 4						
Irbid Population by Age Group (%) (2006-2008)						
Population	2006		2007		2008	
Age Group	Total	Female	Total	Female	Total	Female
0--4	11.50%	11.20%	12.20%	11.90%	11.80%	11.60%
5--9	12.40%	11.20%	12.10%	11.90%	11.70%	11.50%
10--14	13.80%	13.40%	13.10%	13.00%	12.70%	12.70%
15--19	12.70%	12.20%	11.80%	11.70%	12.20%	11.70%
20--24	10.10%	10.60%	10.20%	9.70%	10.60%	9.70%
25--29	7.50%	7.70%	7.90%	8.00%	8.00%	8.00%
30--34	6.30%	7.00%	7.00%	7.40%	6.60%	6.90%
35--39	5.90%	6.50%	6.30%	6.60%	6.20%	6.60%
40--44	5.00%	5.00%	4.90%	5.10%	5.10%	5.50%
45--49	3.50%	3.70%	3.70%	3.80%	3.90%	4.10%
50--54	2.70%	3.00%	2.90%	3.00%	3.00%	3.10%
55--59	2.10%	3.00%	2.20%	2.10%	2.10%	2.20%
60--64	2.20%	1.90%	2.00%	1.90%	2.20%	2.00%
60+	4.30%	3.50%	3.80%	3.90%	4.00%	4.20%

(Source: Department of Statistics)

The Largest age group in Irbid population is between the age of 10 and 14 years of age, while the least age group is above 60 years of age. In general, the population of Irbid is characterized as being a young population.

The common workforce age group that is between the age of 15 years and 39 years represented an average of 43.1% of the population in the last 3 years. The female age group (15 – 39 years) represented 42.9% of the population in 2008. These are significant indicators of the potential availability of young workforce in Irbid (figure 1).

Figure 1: Irbid's population by Age Group - 2008



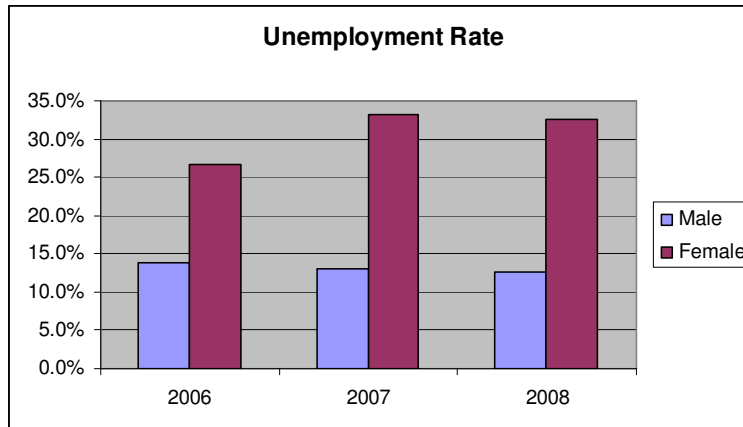
Unemployment and employment Rates

Table 5: Irbid's unemployment rate by gender

Gender	2006	2007	2008
Male	13.9%	13.1%	12.6%
Female	26.6%	33.2%	32.5%
Total	15.6%	16.5%	15.9%

(Source: Department of Statistics)

Figure 2: Unemployment rate in Irbid by Gender



The unemployment rate¹ has increased from 15.6% in 2006 to 16.5% in 2007, while in the year 2008 it has dropped to 15.9%. This fluctuation is due to several factors including the economic situation of Jordan and the labor market. This unemployment rate is considered slightly higher than the average national rate measured in the same years. The unemployment rate among females is higher than that of males, which indicates the tendency to employ more males than females in Irbid.

Table 6: Employment rate in Irbid

Table 6			
Employment Rate (%) in Irbid			
Governorate	2006	2007	2008
Irbid	28.8%	31.3%	31.5%

(Source: Department of Statistics)

The employment rate² in Irbid increased from 28.8% in 2006 to 31.5% in 2008, which indicates that new job opportunities were created.

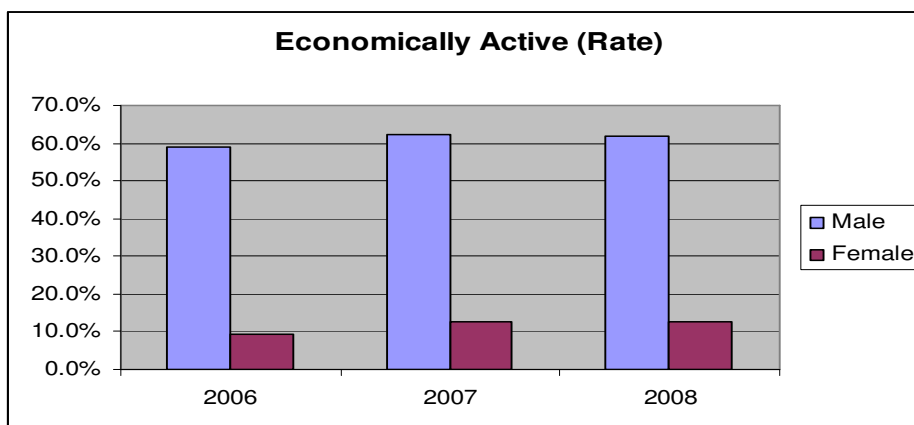
Economic activity rate

Table 7: Economic activity rate in Irbid by Gender

Table 7			
Rate of Economically active in Irbid			
	2006	2007	2008
Male	59.0%	62.4%	61.8%
Female	9.4%	12.7%	12.5%
Total	34.20%	37.50%	37.50%

(Source: Department of Statistics)

Figure 3: Economic Activity rate of males and females in Irbid



¹ Unemployment rate (%) is the number of unemployed divided by population at the age of work (15 years and above).

² Employment rate (%) is the number of employed divided by population at the age of work (15 years and above).

Economically active rate in Irbid increased from 34.2% in 2006 to reach 37.5% and remained as is for both years 2007 and 2008. The economic activity rate of males is significantly higher than that of females. The number of economically active population in Irbid was 244,946 in 2008.

ECONOMICALLY ACTIVE (EMPLOYED AND UNEMPLOYED)

Table 8: Irbid economically active Employed and Unemployed population

Table 8			
Number of Economically active employed and unemployed in Irbid			
Category	2006	2007	2008
Employed	168,181	193,436	206,103
Unemployed	31,179	38,202	38,843

(Source: NCHRD)

According to NCHRD statistics, employed persons in Irbid have been increasing during the last 3 years, from 168,181 employed persons in 2006 up to 206,103 in the year 2008. The rate of increase in employed persons was 15% in 2007 and 6.5% in 2008.

Unemployed persons from the economically active have been increasing as well, which increased from 31,179 unemployed (economically active) people in 2006 to reach 38,843 persons in 2008. The rate of increase in unemployed persons was 22.5% and 1.7% during the years 2007 and 2008 respectively.

Figure 4: Employed and Unemployed workforce in Irbid

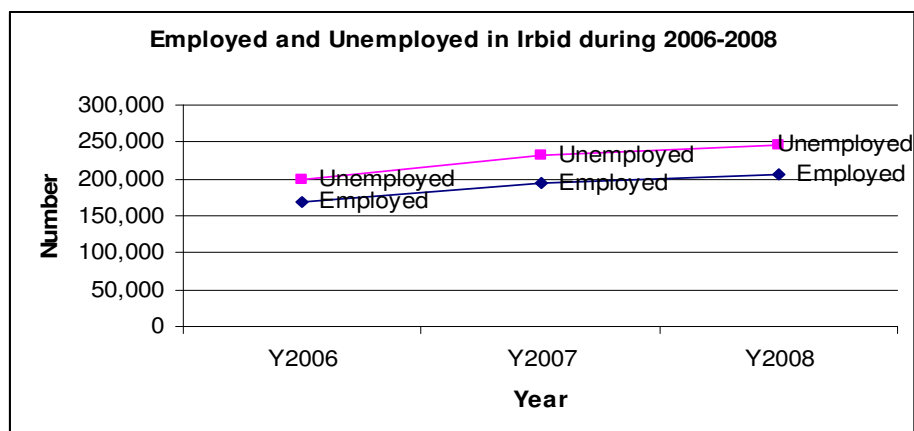


Table 9: Labor force in Irbid

Table 9			
Number of Jordanian labor force in Irbid			
Governorate	2006	2007	2008
Irbid	199,360	231,638	244,946

(Source: NCHRD)

There was an average growth of 11% in the number of labor force in Irbid during 2006 – 2008.

EMPLOYED WORKFORCE BY ECONOMIC ACTIVITY

The employed males are concentrated in the public administration, defense, wholesales and retail trade sectors in Irbid, and they count for 47.4% of the total employed males in all economic activities. On the other hand, the employed females are concentrated in education, health and social work which count for 66.9% of the total employed females in all economic sectors. There is a lack of female employees in few sectors such as tourism.

Table 10: Employed Workforce by economic activity in Irbid

Table 10			
Percentage (%) of employed in Irbid by economic activity			
Economic activity	Male	Female	Total
Agriculture, Hunting and Forestry	3.9	3.4	3.9
Mining and Quarrying	0.5	0.0	0.4
Manufacturing	7.0	6.8	7.0
Electricity, Gas and water Supply	1.4	0.9	1.3
Construction	8.0	0.6	7.0
Wholesale and Retail Trade, Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	15.5	5.1	14.1
Hotels and Restaurants	1.5	0.0	1.3
Transport, Storage and Communications	9.8	0.8	8.6
Financial Intermediation	0.7	0.7	0.7
Real Estate, Renting and Business Activities	2.2	2.6	2.3
Public Administration and Defense, Compulsory Social Security	31.9	5.3	28.4
Education	8.5	49.5	14.0
Health and social Work	3.8	17.4	5.6
Other community, Social and Personal Service Activities	5.0	4.6	4.9
Private Households With Employed Persons	0.0	1.8	0.3
Extraterritorial Organizations and Bodies	0.3	0.3	0.3

(SOURCE: DOS 2009 – EMPLOYMENT AND UNEMPLOYMENT SURVEY)

UNIVERSITY GRADUATES AND FACULTY

University graduates represent an essential part of the qualified labor supply in Irbid. Irbid governorate has gained good reputation in higher education outputs, due to the existing higher education institutions in the area. The main universities serving the population of Irbid are located within the borders of Irbid governorate or neighboring governorates. The universities under the scope of this study include:

- Al Yarmouk University
- Jordan University of Science and Technology
- Irbid National University
- Jerash Private University

- Philadelphia University
- Jadara University

TOTAL BACHELOR DEGREE GRADUATES OF IRBID UNIVERSITIES

Table 11: Total Bachelors degree graduates from Irbid universities

Year	2005-2006			2006-2007			2007-2008		
University	Total	Male	Female	Total	Male	Female	Total	Male	Female
Al Yarmouk University	3598	1392	2206	3594	1268	2326	4003	1377	2626
Jordan University for Science and Technology	3161	1603	1558	2871	1367	1504	2951	1461	1490
Philadelphia	1615	1320	295	1661	1263	398	1659	1324	335
Irbid National University	889	519	370	758	407	351	746	400	346
Jerash Private University	1066	600	466	1239	711	528	1317	734	583
Total graduates	10,329	5,434	4,895	10,123	5,016	5,107	10,676	5,296	5,380

(Source: Annual Statistical Book of MOHESR)

Figure 5: Total Bachelor degree graduates of Irbid universities during 2007-2008 by university

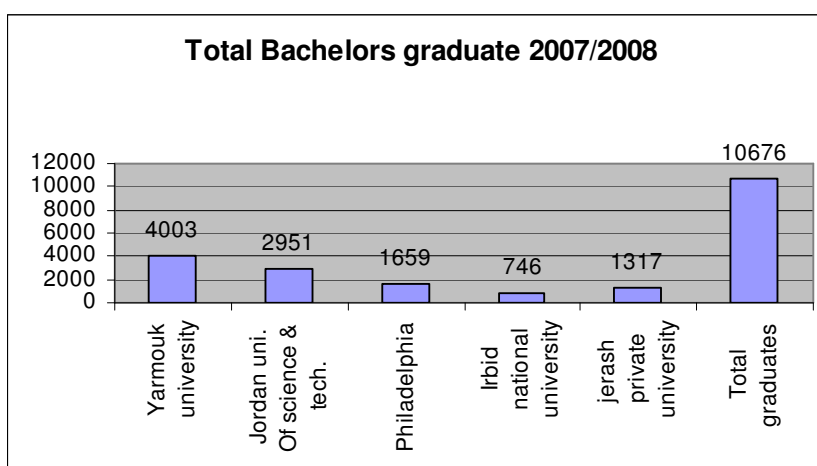


Table (11) above shows the bachelor degree graduates from Irbid universities. During (2006-2007) the universities graduated 10,123 graduates in different fields and specializations. During (2007-2008) a growth of 5.4% led to 10,676 graduates from Irbid universities, among which 49.6% of the graduates were males.

Al Yarmouk University was the main supplier of graduates, contributing 37% of the total graduates in Irbid. The second largest supplier of graduates was the Jordan University for Science and Technology. The lowest number of graduates came from Irbid National University, which has contributed only 6.9% of the total graduates in Irbid. The graduates' records of Jadara University were lacking from the statistics of MOHESR.

Furthermore, most universities lack the information about place of residence of their graduates, therefore, only Al Yarmouk university was able to provide the breakdown of graduates according to place of residence (table 12). It was found that 60% of BA level graduates are Irbid residents. Some universities were able to provide graduates statistics detailed according to gender and specialization. The detailed Bachelor degree graduates numbers by university, specialization, gender and residence are included in appendix 1. By a comparative review of the numbers of graduates according to specializations, it is noticed

that there are significant graduates in specializations that are expected to be utilized in the development area, mainly IT, Engineering, Business Administration, Health and Education.

Table 12: Al Yarmouk University bachelor graduates according to place of residence

Table 12									
Bachelor degree graduates from Al Yarmouk university by year and place of residence									
Year	2006-2007			2007-2008			2008-2009		
Degree	Total	Irbid residents	%	Total	Irbid residents	%	Total	Irbid residents	%
BA Graduates	3594	2060	57%	4003	2326	58%	4316	2604	60%

(Source: Al Yarmouk university statistics)

TOTAL HIGHER DEGREES (HIGH DIPLOMA, MASTERS AND PHD) GRADUATES OF IRBID UNIVERSITIES

During the last few years, many bachelor degree holders have enrolled in higher degrees programs (High Diploma, Masters and PhD) to upgrade their academic qualifications. On the other hand, public and private universities sensed the increasing demand on higher degrees, therefore introduced numerous programs and specializations. Table (13) below illustrates the graduates of higher degrees in Irbid.

Table 13: Total higher degrees graduates from Irbid universities

Table 13									
Total Higher degrees graduates from Irbid universities by year and gender									
Higher Diploma Degree									
Year	2005-2006			2006-2007			2007-2008		
Universities	Total	Male	Female	Total	Male	Female	Total	Male	Female
Al Yarmouk University	575	359	216	255	74	181	242	74	168
Jordan University for Science and Technology	23	15	8	32	23	9	43	28	15
Philadelphia	NA	NA	NA	NA	NA	NA	NA	NA	NA
Irbid National University	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jerash Private University	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total graduates	598	374	224	287	97	190	285	102	183
Master Degree									
Al Yarmouk University	829	505	324	710	402	308	748	413	335
Jordan University for Science and Technology	361	212	149	325	204	121	312	174	138
Philadelphia	NA	NA	NA	NA	NA	NA	8	7	1
Irbid National University	NA	NA	NA	NA	NA	NA	NA	NA	NA
Jerash Private University	NA	NA	NA	NA	NA	NA	6	3	3
Total graduates	1190	717	473	1035	606	429	1074	597	477
PhD Degree									
Al Yarmouk University	84	62	22	78	61	17	128	105	23

(Source: Annual Statistical Book of MOHESR)

Table (13) above shows that there are significant differences between universities in the number of high degree graduates. The universities, which have the higher diploma degree, include Al Yarmouk University and Jordan University for Science and Technology. 85% of the graduates were from Al Yarmouk University and the other 15% were from the Jordan University for Science and technology.

Masters degree graduates from Irbid universities reached a total of 1190 in 2005-2006, and 1035 in 2006-2007. In 2007-2008, a growth of 3.7% in the number of higher degree graduates led to 1074 graduates from Irbid universities, among which 55.5% of the graduates were males.

As for the PhD degree graduates, only Al Yarmouk University had offered this program. Male graduates of the PhD degree are triple the number of female graduates of PhD degree.

The specializations of higher degree graduates are highly diversified, and some of these specializations are uniquely relevant to the expected projects in Irbid Development Area according to activity including:

- **Financial: economics and Islamic banking, advanced accounting and public administration.**
- **Health: health service management, movement science, physical education, biotechnology, public health, nursing, pharmacology, toxicology, medical laboratory sciences and special surgery.**
- **Education: chemistry, physics, biology, geology, statistics, education psychology, curriculum and teaching.**
- **ICT: Information and communication technology, computer engineering, mathematics, and computer information systems (CIS).**
- **Industry: production planning, industrial engineering and manufacturing techniques.**

The proportion of higher degree graduates residing in Irbid was unavailable except from Al Yarmouk university (table 14).

Table 14: Higher degree graduates of Al Yarmouk university according to place of residence

Table 14									
Higher degree graduates from Al Yarmouk university by year and place of residence									
Year	2006-2007			2007-2008			2008-2009		
Degree	Total	Irbid residents	%	Total	Irbid residents	%	Total	Irbid residents	%
Higher Diploma	268	177	66%	267	167	63%	397	195	49%
Master	742	393	53%	865	436	50%	787	373	47%
PhD	81	49	60%	156	88	56%	158	70	44%

TOTAL NUMBER OF FACULTY STAFF IN IRBID UNIVERSITIES

The faculty numbers and qualifications of Irbid universities are available from the six universities of Irbid as defined earlier. Universities faculty in Irbid are characterized by high qualifications and wide spectrum of specializations.

Table 15: Academic faculty in Irbid universities by academic rank

Table 15			
Academic faculty in Irbid universities during years 2005 – 2008			
Faculty rank	2005-2006	2006-2007	2007-2008
Full professor	344	363	390
Associate professor	419	437	459
Assistant professor	789	854	862
Instructor	268	239	246

Lecturer	139	75	120
Teaching and research assistant	160	75	81
Total	2119	2043	2158

(Source: Annual Statistical Book of MOHESR)

In general, the overall number of faculty members in Irbid universities has grown during the period 2005 - 2008. As demonstrated in table (15) above, most of the faculty is within the assistant professor and associate professor ranks. It was noticed that private universities depend on instructor's more than public universities, and they rarely have teaching and research assistants among their faculty.

Table 16: Academic faculty in Irbid universities by specialization

Table 16			
Total number of academic faculty members in Irbid universities by specializations			
Specialization	2005-2006	2006-2007	2007-2008
Educational sciences	117	132	151
Humanities and religion	406	357	360
Fine and applied arts	52	54	66
Law	59	72	81
Social and behavioural sciences	59	75	72
Commercial and business administration	164	153	146
Mass communication and documentation	20	19	16
Physical education	30	30	30
Natural sciences	218	210	226
Mathematics and computer	270	233	234
Medicine	142	155	157
Dentistry	43	47	48
Pharmacy	59	49	50
Para-medical sciences	70	81	106
Engineering	296	267	292
Architecture and town planning	13	15	19
Applied engineering	0	0	0
Agriculture	68	69	76
Veterinary medicine	23	25	28
Total	2109	2043	2158

(Source: Annual Statistical Book of MOHESR)

Table (16) above indicates that the faculty in Irbid universities is concentrated in humanities and religion sciences, which is irrelevant to the potential areas of investment in Irbid Development Area. On the other hand, faculty in the fields of engineering, mathematics, computer, natural sciences and business administration is considered adequate and responds to the expected needs of Irbid Development Area.

The faculty in Irbid covers various fields of science and arts, and they could be part of the workforce supply or they could play a role in developing workforce through qualifying and graduating high quality labor.

COMMUNITY COLLEGES GRADUATES AND FACULTY

COMMUNITY COLLEGES (DIPLOMA) GRADUATES

There are six community colleges that exist in Irbid, including:

- Irbid College
- Al Husun University College
- Para-medical Institute
- Nusaybah Nursing College
- Granada College
- Ibn Khaldoun College

Community colleges are technical education institutions, which provide practical education and training in several technical programs. The community colleges offer a two-year program for students, and when completed, they graduate with the diploma degree.

Table 17: Total number of diploma graduates of Irbid community colleges

Table 17			
Total diploma graduates of Irbid community colleges			
College	2007	2008	2009
Irbid College	425	565	414
Para-medical Institute	83	122	93
Al Husun University College	263	325	348
Ibn Khaldoun College	69	120	62
Granada College	295	347	203
Nusaybah Al Mazenyah Nursing College	163	173	168
Total	1298	1652	1288

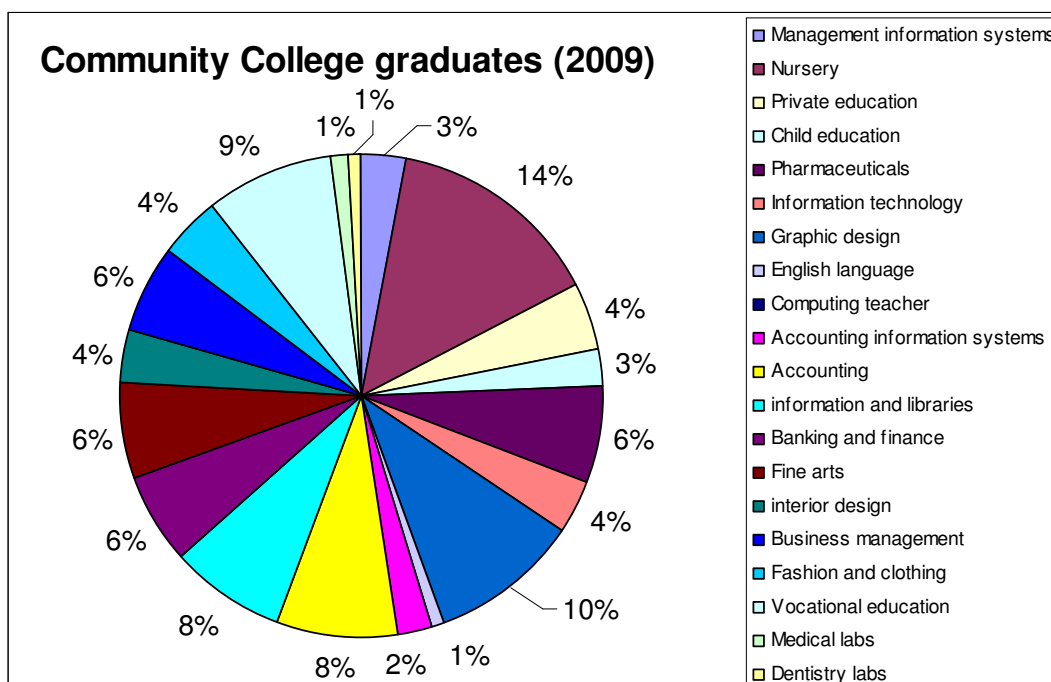
In the year 2008, Irbid College had the highest number of graduates who reached 565 graduates; Granada College had the second highest number of graduates with 347 graduates.

Table 18: Irbid Community college graduates by specialization

Table 18 Community colleges Graduates in Irbid by specialization			
Specialization	Total		
	2007	2008	2009
Accounting	84	92	67
Management information systems	126	148	66
Finance and banking	24	39	33
Business management	34	41	36
Education and library	86	65	70
Information technology	46	41	81
Pharmacy	48	25	48
Fine Arts	22	35	45
Interior design	41	94	99
Graphic design	43	93	59
Fashion and clothing	57	58	64
Child education	102	124	15
Vocational education	15	55	35
Secretarial and office work	1	0	0
Industrial engineering	4	4	12
Chemical industry	9	19	17
Petrochemical industry	4	4	0
Laboratories	3	3	0
Electricity	11	16	7
Autotronics	5	4	4
Computer technology	18	12	33
Electronics	5	9	7
Drilling and mining	0	6	14
Air-conditioning systems and refrigeration	13	24	27
Production technology	40	5	7
Food Technology	7	21	18
Accounting information systems	8	23	11
electronic management	8	3	0
Medical laboratories	9	6	9
Nursing	263	375	242
Computing teacher	36	36	5
English teacher	9	14	3
Special education	23	9	10
Hotel management	9	0	0
Dental laboratories	3	3	4
Anesthesia and recovery	19	50	25
Sterilization	0	0	26
X-ray technology	19	24	23
Medical record	1	24	19
Midwifery	26	30	47
Health Surveillance	17	18	0
Total	1298	1652	1288

(Source: Collected data from Balqa Applied University)

Figure 6: Community College Graduates in Irbid by specialization



Most of the community colleges graduates live in Irbid. Irbid community colleges graduated 1123 students in 2007, while the number of graduates decreased to 995 graduates in 2008 and then grew slightly to reach 1051 graduates in the year 2009. As shown in the figure (6) above in the year 2009 business management had the highest number of graduates of about (10%) of community college (diploma) graduates, followed by the vocational education (9%) then accounting and information libraries (8%). The overall number of technical diploma graduates is considered limited when compared to the number of university graduates in Irbid.

The relevant specializations of Irbid community college graduates (technical diploma holders) include IT professions (e.g. management information systems, graphic design), para-medical professions, educational professions and commercial professions. The graduates in all specializations are proportionally balanced, with concentration in nursing, IT and accounting.

COMMUNITY COLLEGES FACULTY

Table 19: Community colleges staff by education degree

Table 19			
Community colleges faculty in Irbid by academic qualifications			
Degree	2005-2006	2006-2007	2007-2008
PhD	83	90	121
M.A/M.Sc	89	93	113
Higher Diploma	4	6	12
B.A/B.Sc.	62	62	62
Intermediate Diploma	9	14	6
Total	247	265	314

(Source: Annual Statistical Book of MOHESR)

The number of community colleges faculty staff in Irbid was 247 in 2005-2006 and increased to 265 in 2006-2007, and increased to 314 in 2007-2008. Most of the community colleges faculty in Irbid is highly qualified, holding PhD and Masters degrees.

Table 20: Faculty of Irbid community colleges by program

Table 20			
Community colleges faculty in Irbid by program (specialization)			
Program	2005-2006	2006-2007	2007-2008
Languages and basic sciences	25	19	65
Educational	39	37	36
Engineering	43	49	53
Agricultural	6	6	7
Para-medical sciences	60	74	73
Administrative and finance	29	37	31
Information management and libraries	29	33	20
Hotel management	1	0	0
Applied fine arts	15	20	29
Applied sciences	0	0	0
Shari'a sciences	0	0	0
Social work	0	0	0
Total	247	265	314

(Source: Annual Statistical Book of MOHESR)

As can be concluded from table (20), the community college faculty is mainly concentrated in the para-medical sciences, languages, educational and engineering programs. The number of faculty in the information management, administrative and finance programs is also significant. These programs are directly relevant to the expected investments in Irbid Development Area.

VOCATIONAL TRAINING CENTERS GRADUATES

Table 21: VTC graduates of Irbid vocational training centers

Table 21						
Vocational Training Corporation graduates of Irbid vocational centers by year						
VTC Name	2006		2007		2008	
	Male	Female	Male	Female	Male	Female
Information technology training center / Irbid	63	48	46	54	160	25
Vocational training center / Hakama	270	1	297	0	166	0
Vocational training center / Al-Ramtha	95	0	113	3	73	20
Vocational training center / Al-Mashare'	128	15	230	36	94	32
Irbid Vocational training center (Females)	8	123	21	314	9	180
Total	564	187	707	407	502	257
	751		1114		759	

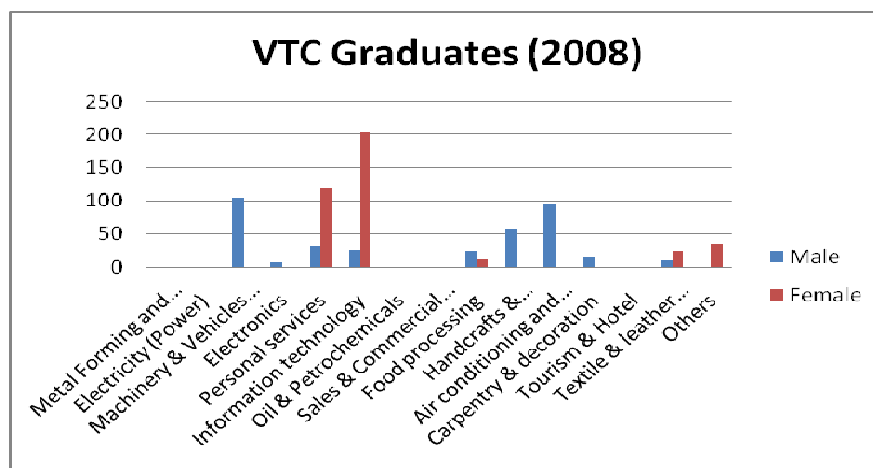
In the year 2008, Irbid vocational training center (females) had the highest number of graduates with 180 female graduates and 9 male graduates, while vocational training center/ Al-Ramtha had the lowest number of graduates with 73 females graduates and 20 male graduates.

Table 22: Total graduates of VTC in Irbid by occupational family

Table 22						
VTC graduates in Irbid by occupational family and gender						
Occupational family	2006		2007		2008	
	Male	Female	Male	Female	Male	Female
Metal Forming and general mechanical maintenance	78	0	149	0	65	0
Electricity (Power)	13	0	9	0	0	0
Machinery and Vehicles maintenance	155	0	202	0	103	0
Electronics	5	0	8	0	7	0
Personal services	67	77	97	138	56	119
Information technology	110	88	51	121	25	215
Oil and Petrochemicals	0	0	0	0	0	0
Sales and Commercial services	9	0	0	71	0	0
Food processing	20	0	60	24	24	11
Handcrafts and traditional products	0	0	0	0	0	0
Air conditioning and sanitary piping	67	0	80	0	61	0
Carpentry and decoration	34	0	50	0	14	0
Tourism and Hotels	0	0	0	0	0	0
Textile and leather industry	12	20	0	53	9	23
Others	6	0	2	0	3	24
Total	576	185	708	407	367	392

(Source: VTC statistics)

Figure 7: VTC graduates in Irbid by occupational family and gender



Irbid VTC's graduates for the year 2008, showed that most of the females graduated in information technology program (215), followed by personal services such as (secretary, hairdresser...etc). In the other programs, male graduates are more than female graduates.

Most of the males graduated in the machinery and vehicles maintenance (103) graduates, followed by Air conditioning and sanitary piping with (61) graduates in 2008.

It is worth mentioning that the VTC graduates obtain different schemes of training in terms of the occupational level (limited skill, skillful and professional).

6. PROFESSIONAL SERVICES

Professional services include a range of business support services which are provided by various expertise of labor such as banking, insurance, auditing, legal advisory, management consulting and other services. In most cases, Irbid business sector is covered from Amman in terms of using professional services, as headquarters of professional services companies are usually established in Amman, while in rare cases there are branches in Irbid.

Banking and Insurance

A number of financial services are expected to establish projects in IDA, therefore, the availability of experienced workforce will support their investments in the operations stage. The information about the labor of financial services (mainly banking and insurance) in Irbid is limited to the number of employees. Tables (23) and (24) illustrate the statistics.

Table 23: Employees of banks in Irbid

Table 23 Employees in Irbid Banks	
Year	Total Number of employees
2007	754
2008	818

(Source: Association of Banks in Jordan – Annual Reports)

The number of employees within the banking sector in Irbid increased from 754 in 2007 to 818 in 2008. This was mainly due to opening new bank branches in Irbid. The distribution of the employees in Irbid according to gender and job/position is unavailable from the sources.

Financial services

Information regarding auditors based in Irbid was provided by Jordanian certified auditors association, where it declared that there are seven practicing auditing in Irbid including:

- Sameeh Abu Rahmoun
- Tu'ma Abul-Sha'ar
- Muneer Milhem
- Ma'rouf Al Megbel
- Ahmed Ayed Al-Rashdan
- Abdallah Abul-Geish

Table 24: Total number of insurance companies employees in Irbid

Table 24 Number of employees in the insurance sector in Irbid			
Year	No. of employees	Gender	Age
2007	17	Male	25-55
2008	18	Male	25-55
2009	16	Male	25-55

(Source: Jordan Insurance Federation)

The number of employees working in the insurance companies in Irbid is limited, due to the fact that insurance services requested in Irbid are covered from Amman branches.

7. INDUSTRIAL LABOR FORCE

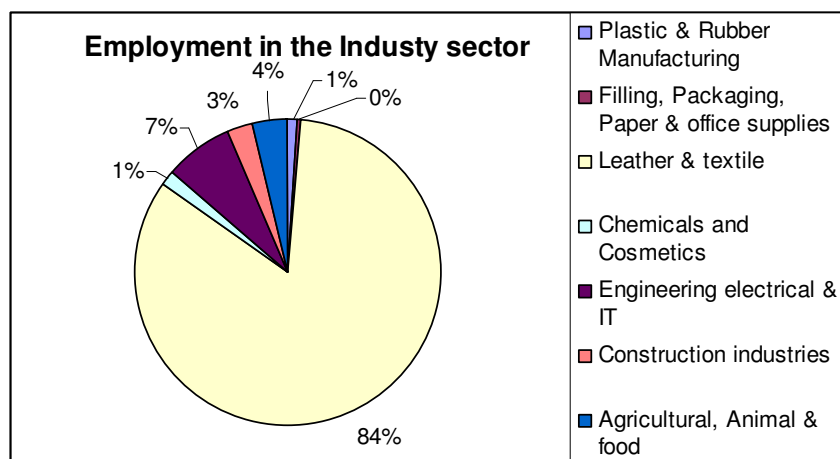
IDA is expected to attract special industries (e.g. electronics and IT); therefore, the profile of the industrial workforce gives an indication of the size of labor in this sector. The total number of employees in the industrial sector in Irbid is provided in table (25) below.

Table 25: Irbid industry employees distributed by industry type

Table 25		
The number of industrial labor in Irbid Governorate (2009)		
No.	Sector Name	Labor number
1	Plastic and Rubber manufacturing	249
2	Filling, Packaging, Paper and office supplies	60
3	Leather and textile	18,583
4	Chemicals and Cosmetics	327
5	Electrical engineering and IT	1,627
6	Construction industries	614
7	Agricultural, Animal and food	811
Total		22,271

(Source: Irbid Chamber of Industry)

Figure 8: Industrial workforce in Irbid 2009



As indicated in table (25) above, the total employees working in industry and manufacturing in Irbid reached 22,271 employees in 2009. About 83% of the employees work in the Leather and textile manufacturing, 7% work in electrical engineering and IT, while the rest of the employees are distributed on other industries. The high proportion of workforce in the textile sector is due to the international textile and clothes manufacturers at Al Hasan QIZ estate in Remtha, which is considered a labor-intensive sector (table 26).

Table 26: Labor and companies of the textile industry at Al Hasan QIZ estate

Table 26										
Labor and companies of the textile industry at Al Hasan QIZ estate by year										
Year	Number of Al Hasan QIZ textile companies	Jordanian Labor			Non-Jordanian Labor			Total Labor	Percentage of Jordanian labor	Percentage of non-Jordanian labor
		M	F	Total	M	F	Total			
2007	38	2686	3930	6616	5755	7062	12817	19433	34%	66%
2008	39	1954	3235	5189	5652	6708	12360	17549	30%	70%
2009	33	1193	2501	3694	3845	5314	9159	12853	29%	71%

(Source: Ministry of Labor)

8. HEALTH CARE LABOR FORCE

TOTAL PHYSICIANS OF IRBID'S HEALTHCARE SECTOR

Table 27: Total physicians in Irbid by specialty

Table 27	
Total number of physicians in Irbid	
Specialty	2008
General Medicine and Surgery	42
Dentist	9
Veterinarian	2
Diagnostic Radiology	9
Pediatricians	29
Peptic doctor	2
Blood Diseases	1
Chest diseases	2
Diseases of the mouth and gums	1
Cardiovascular	1
Tropical Diseases	1
Speech and hearing therapy	1
Internal Disease	20
Skin and reproductive system	13
Brain and Nerves	2
Diseases of endocrine glands	6
Urologist	1
Psychiatric and neurological	1
ENT doctor	10
Ambulance and emergency	9
Clinical Pathological	2
Rehabilitation and physical therapy	3

Anesthesia and recovery	16
Orthodontics	4
Gynecologist	36
Pediatric Surgery	4
Plastic Surgery	3
Neurosurgeon	1
General Surgery	27
Orthopedics	23
Eye surgery	20
Oral Surgery	6
Urology	7
Pediatric Dentistry	4
Installation of teeth	6
Clinical laboratories	1
Nephrologists	2
provisional treatment	1
Total	328

(Source: MOH and hospitals in Irbid)

Statistics of the healthcare labor in Irbid are available for the year 2008. Irbid healthcare sector had over 300 physicians in 2008, where the majority of the doctors were specialized in general medicine and surgery, followed by Gynecologist, Pediatricians, General Surgery, Orthopedics and Eye surgery.

TOTAL HEALTH CARE STAFF (EXCLUDING PHYSICIANS) OF IRBID'S HEALTHCARE SECTOR.

Table 28: Healthcare workforce in Irbid

Table 28	
Healthcare workforce in Irbid	
Staff	2008
Nurse (Female)	389
Nurse (Male)	196
Labor Nurse	169
Assistant Nurse (Female)	269
Assistant Nurse (Male)	140
Nursing worker (Female)	14
Nursing worker (Male)	7
Lab Technician	30
Lab Technician Engineer	109
Anesthesia Technician	79
X-Rays Technician	7
X-Rays Technician Engineer	98
Physiotherapy Technician	3
Physiotherapy Technician Engineer	10
General health Engineer	2

Dentist Technician Engineer	7
Pharmacist	29
Pharmacist Engineer	82
Medical Devices Technician	17
Prosthetic Technician	1
Presumptive treatment Technician	2
Dietician	10
Dietician Technician	1
health tutor	1
Nutritionist	1
Nutritionist Engineer	2
Nutritionist Technician	3
Functional treatment	1
Nutrition Assistant	2
Nurse Associate (Male)	76
Nurse Associate (Female)	194
Others	13
General health technician	8
Total	1,972

(Source: MOH and hospitals in Irbid)

Irbid healthcare sector employed staff 1,971 staff (excluding physicians) in 2008, which consists of 56% nursing staff, pharmacists and laboratory technicians.

9. JOB OPPORTUNITIES

A good indicator of the labor force supply in Irbid can be extracted from the records of the employment office at the labor directorate of Irbid. Table (29) below shows the job applications received in Irbid and the result of employment matching.

Table 29: Job applicants and jobs created in Irbid

Table 29						
Job applicants and employed in Irbid						
Year	Job seekers		Transferred		Employed	
	Male	Female	Male	Female	Male	Female
2008	2011	762	1369	293	836	143
Total	2773		1662		979	
2009	1959	956	1398	581	1155	535
Total	2915		1979		1690	

(Source: Irbid Labor Directorate – Employment Office)

In 2008, there were 2773 job seekers in Irbid and 1662 job seekers transferred from other governorates to Irbid, which ended in employing only 979. This means that only 22.1% of the applicants and the transferred to Irbid were employed in 2008. In 2009, the percentage of employed increased to 34.5%. Male applicants are usually employed faster than female applicants. For example, in the year 2008, 24.7% of male job seekers were employed compared to 13.6% female job seekers.

10. EDUCATION WORKFORCE

The education sector provides a range of workforce with experience in teaching and educational specializations and techniques, which is considered one of the main themes targeted by IDA. Table (30) shows the number of secondary school teachers working in Irbid schools over three years.

Table 30: Total number of schoolteachers in Irbid

Table 30									
Ministry of Education Teachers									
Specialization	2006			2007			2008		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
No High school Degree	3	0	3	3	0	3	3	0	3
High school Degree	7	2	5	10	4	6	6	2	4
Diploma (Community College)	326	135	191	481	196	285	342	148	194
Bachelors Degree	1964	888	1076	2085	941	1144	2157	932	1225
Diploma Degree	220	138	82	261	183	78	278	177	101
Masters Degree	186	99	87	210	141	69	274	162	112
PhD	12	9	3	15	15	0	20	17	3
Total	2718	1271	1447	3065	1480	1585	3080	1438	1642

(Source: MOE)

As can be seen in the above table, there are limited number of teachers holding higher academic degrees. Female teachers are more than male teachers.

11. LABOR DEMAND PROFILE

In order to understand the type of labor demand in Irbid, statistics about the business sectors were collected. Irbid has a mixed business profile, with enterprises covering most of the economic activities. Enterprises tend to be small to medium in terms of labor size, except for some companies operating at Al Hassan Industrial Estate (QIZ), which are classified as large enterprises.

ESTABLISHMENTS BY ECONOMIC ACTIVITY IN IRBID

Table 31: Number of Enterprises in Irbid by activity

Table 31	
Number of Enterprises in Irbid by activity	
Economic Activity	No.
Mining and Quarrying	11
Manufacture of food products and beverages	897
Manufacture of Textiles	78
Manufacture of wearing apparel, dressing and dyeing of fur	317
Tanning and dressing of leather, Manufacture of luggage, handbags, saddler, harness and footwear	8
Manufacture of woods and products of woods and cork, except furniture, manufacture of articles of straw and plaiting of materials	171
Manufacture of paper and paper products	1
Publishing, printing and reproduction of recorded media	58
manufacture chemicals and chemical products	15
manufacture of rubber and plastics products	17

manufacture of other nonmetallic minerals products	497
manufacture of basic metals	2
Manufacturing of fabricated metal products, except machinery and equipment	751
Manufacture of machinery and equipment n.e.c	47
Manufacture of electrical machinery and apparatus n.e.c	14
Manufacture of medical precision and optical instruments, watches and clocks	39
Manufacture of motor vehicles, trailers and semi-trailers	17
Manufacture of furniture, manufacturing n.e.c	455
Recycling	5
Electricity, gas, steam and hot water supply	1
Construction	155
Sale, Maintenance and repair of motor vehicles and motorcycles, retail sale of automotive fuel	2164
Wholesale trade and commission trade, except of motor vehicles and motorcycles	573
Retail trade, except of motor vehicles and motorcycles, repair of personal and household goods	12659
Hotels and restaurants	917
Land transport, transport via pipelines	49
Supporting and auxiliary transport activities, activities of travel agencies	96
Post and telecommunications	1
Financial intermediation, except insurance and pension funding	3
insurance and pension funding, except compulsory social security	2
Activities auxiliary to financial intermediation	32
Real estate activities	119
Renting of machinery and equipment without operator and or personal and household goods	150
Computer and related activities	159
other business activities	906
Education	383
Health and social work	517
Activities of membership organization n.e.c	28
Recreational, cultural and sporting activities	113
other services activities	1257
Total	23684

Source: Establishments census, DOS 2006

According to DOS establishments' census 2006, the highest number of enterprises are in the "Retail Trade" with over 12,600 enterprises, followed by "Sale, Maintenance and repair of motor vehicles and motorcycles, retail sale of automotive fuel" with over 2,100 establishments in Irbid.

EMPLOYMENT BY ECONOMIC ACTIVITY IN IRBID

Table 32: Employed workforce by economic activity in Irbid

Table 32			
Irbid's employed workforce by economic activity			
Economic Activity	Male (%)	Female (%)	Total (%)
Agriculture, Hunting and Forestry	3.9	3.4	3.9
Mining and Quarrying	0.5	0.0	0.4
Manufacturing	7.0	6.8	7.0
Electricity, Gas and water Supply	1.4	0.9	1.3
Construction	8.0	0.6	7.0
Wholesale and Retail Trade, Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	15.5	5.1	14.1

Hotels and Restaurants	1.5	0.0	1.3
Transport, Storage and Communications	9.8	0.8	8.6
Financial Intermediation	0.7	0.7	0.7
Real Estate, Renting and Business Activities	2.2	2.6	2.3
Public Administration and Defense, Compulsory Social Security	31.9	5.3	28.4
Education	8.5	49.5	14.0
Health and social Work	3.8	17.4	5.6
Other community, Social and Personal Service Activities	5.0	4.6	4.9
Private Households With Employed Persons	0.0	1.8	0.3
Extraterritorial Organizations and Bodies	0.3	0.3	0.3

Source: Employment and Unemployment survey, DOS 2009

The above table gives some indications on the current profile of labor demand in Irbid as shown by the current businesses, measured as proportional distribution of the employed. The highest proportion of employees work in the public administration and defense (government sector), while the wholesale and retail and education together come in the second place in terms of workforce demand. Manufacturing and construction enterprises are also among the major workforce employers in Irbid with 7% of total labor. About half of the female workforce is observed in the education sector, while approximately third of the male workforce are employed in the public sector.

ECONOMIC ACTIVITIES IN IRBID DEVELOPMENT AREA AND QUALITATIVE EXPECTED LABOR DEMAND

IDA Company determined the main sectors and activities expected to invest in IDA which include:

Technology and Telecommunication: which typically include the following sub-activities:

Table 33: Technology and Telecommunications

Table 33		
Technology and Telecommunications sub-activities and required specializations		
Economic Activity	Main Jobs	Education / Specialization
Computer hardware	<ul style="list-style-type: none"> - Maintenance manager - Maintenance technician - Maintenance engineer - Network technician - Network engineer 	<ul style="list-style-type: none"> - B.Sc. computer engineering - B.Sc. computer science - MA computer and IT - Diploma IT and computer
Computer software	<ul style="list-style-type: none"> - Project manager - Team leader - System analyst - Programmer - Quality control - System administrator - Technical writer 	<ul style="list-style-type: none"> - B.Sc. Software engineering - B.Sc. computer science - MA computer and IT - Diploma IT and computer
Information Technology services	<ul style="list-style-type: none"> - IT Manager - System Analyst - Software engineer - IT Administrator 	<ul style="list-style-type: none"> - B.Sc. Information technology - MA computer and IT - Diploma IT and computer
Internet and E-commerce services	<ul style="list-style-type: none"> - Web design 	<ul style="list-style-type: none"> - B.Sc. Web development

	<ul style="list-style-type: none"> - Web Development - Internet/Intranet Administrator 	<ul style="list-style-type: none"> - B.Sc. Web design - MA computer and IT - Diploma IT and computer
Telecommunications	<ul style="list-style-type: none"> - Telecommunication engineer - Wireless administrator - Networking engineer 	<ul style="list-style-type: none"> - B.Sc. telecom engineering - B.Sc. Networking - MA computer and IT - Diploma IT and computer

Business Process Outsourcing (BPO) sector: this sector basically includes Call Centers activities. IDA has a potential investors of three call centers:

- Extensya
- Crystel Call
- Zain

The required jobs, specializations and labor demand are detailed in the following section "4. Total labor demand of IDA" in this report.

Healthcare and Science: which includes the following sub-activities:

Table 34: Healthcare and Science

Table 34		
Healthcare and Science sub-activities and required specializations		
Economic Activity	Main Jobs	Education / Specialization
Biotechnology	<ul style="list-style-type: none"> - Project director - Laboratory technician - R&D scientist - Formulation scientist - Infection control practitioner - Drug analyst - Clinical data manager - Quality control officer 	<ul style="list-style-type: none"> - B.Sc., MA and PhD in life sciences including biology, chemistry, environment, medicine, pharmacy and others.
Medical / Hospital service	<ul style="list-style-type: none"> - Doctor - Nurse - Surgeon - Medical support 	<ul style="list-style-type: none"> - B.Sc. Medicine - B.Sc. Nursing - B.Sc. Surgery - B.Sc. Biology / Chemistry - MA Medicine / Pre Medicine
Pharmaceutical services	<ul style="list-style-type: none"> - Pharmacist - Drug specialist - Nutritionist 	<ul style="list-style-type: none"> - B.Sc. Pharmaceuticals - B.Sc. Biology / Chemistry - MA Medicine / Pre Medicine
Science R&D services	<ul style="list-style-type: none"> - Drug research and development 	<ul style="list-style-type: none"> - B.Sc. Biology / Chemistry - B.Sc. Medicine - MA Medicine / Pre Medicine
Medical laboratory services	<ul style="list-style-type: none"> - Medical laboratory analysis 	<ul style="list-style-type: none"> - B.Sc. Biology / Chemistry - B.Sc. Medical laboratory - MA Medicine / Pre Medicine

Business support and financial services: which may include the following sub-activities:

Table 35: Financial Services

Table 35		
Business support and financial services sub-activities and required specializations		
Economic Activity	Main Jobs	Education / Specialization
Accounting / Auditing services	<ul style="list-style-type: none"> - Financial Manager - Financial Controller - Internal Auditor 	<ul style="list-style-type: none"> - BA Accounting - BA Finance - MBA Accounting, Finance, Audit - CPA, CIA
Banking services	<ul style="list-style-type: none"> - Banking clerk - Investment Sales and Advisory - Financial analyst - Sales 	<ul style="list-style-type: none"> - BA Business management - BA Accounting/ Finance - MBA Banking/Finance
Credit and Finance services	<ul style="list-style-type: none"> - Financial controller - Financial Analyst - Accountant - Credit Administrator 	<ul style="list-style-type: none"> - BA Business management - BA Accounting/ Finance - MBA Banking/Finance
Insurance services	<ul style="list-style-type: none"> - Risk management - Sales - Insurance Coordinator 	<ul style="list-style-type: none"> - BA Sales - BA Finance / Business - MBA Banking/Finance
Business Support services	<ul style="list-style-type: none"> - Marketing - Administration - Business development 	<ul style="list-style-type: none"> - BA Marketing - BA Finance / Business - MBA Business/Finance
Consulting services	<ul style="list-style-type: none"> - Financial consulting - Management consulting - Investment consulting - Marketing consulting - Training 	<ul style="list-style-type: none"> - BA Business management - BA Finance / Business - MBA Business/Finance
Stock Exchange and financial investment	<ul style="list-style-type: none"> - Broker - Financial analyst - Portfolio manager 	<ul style="list-style-type: none"> - BA Business Administration - BA Marketing - BA and MBA international trade / marketing - BA and MBA financial management
Procurement Contracts/Purchasing services	<ul style="list-style-type: none"> - Procurement officer - Purchase coordinator 	<ul style="list-style-type: none"> - BA Finance & Accounting - BA Business Administration
Customer services	<ul style="list-style-type: none"> - Key account manager - Sales - Account executive - Customer care 	<ul style="list-style-type: none"> - B.Sc. Business administration - B.Sc. Sales - MA Business/Sales

12. QUANTITATIVE LABOR DEMAND OF IDA

The collected data from potential companies of IDA was analyzed on the level of company in order to assess the expected demand of labor and the characteristics of this labor. The data was collected from three BPO call centers and one hotel.

Table 36: Estimated labor demand in call centers by department

Department	Average	Total	%
Management/administration	8	23	0.94
Operations	746	2238	93.19
Quality Assurance	19	56	2.31
Commercial/marketing	5	14	0.56
Financial	5	14	0.56
Human Resources / development and training	12	35	1.44
Technical Maintenance	6	17	0.69
Other (Drivers, Security...etc)	3	8	0.31
Total	801	2402	100%

As stated above, the average number of labor in the call center is about 800 employees, which means that opening three call centers in IDA might generate 2,400 job opportunities. The labor of call centers is concentrated in the operations department; therefore it is a labor intensive sector.

IDA is expected to attract one hotel, classified as 4 stars hotel. This project will support the needs of the other sectors and projects planned in IDA, by providing hospitality, catering and accommodation services.

Table 37: Estimated labor demand in the hotel by department

Department	4 Stars Hotel	
	number	%
Management	5	0.33
Front Office	23	7.67
Food and Beverage	102	34.00
Marketing and sales	5	1.67
Financial	20	6.67
Human resources	14	4.67
Security	18	6.00
Maintenance	30	10.00
Housekeeping	80	26.67
Other (recreation, purchasing, banqueting, spa...etc.)	64	2.33
Total	361	100%

According to the above tables, when the companies start operating, three call centers will require a total number of 2,400 employees, while the hotel requires 360 employees, therefore the total labor demand will be 2,760.

13. LABOR DEMAND BY DEPARTMENT AND POSITION

It was found that the main departments that can absorb the highest employment in the hotel include food and beverage (29 %), housekeeping (22%) and front office (6%). While the call centers are heavily depending on human resources in the operations department, which has 93% of total employees. According to response from the investor, the labor demand in terms of gender males concentrated in Food & beverage and other, while demand for females concentrated in management and administrative jobs.

Figure 9: Proportion of labor demand by department in call centers

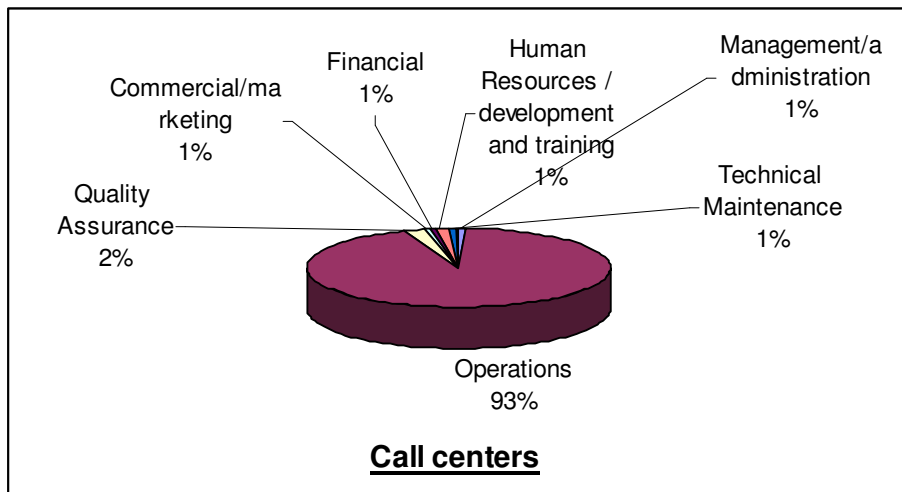
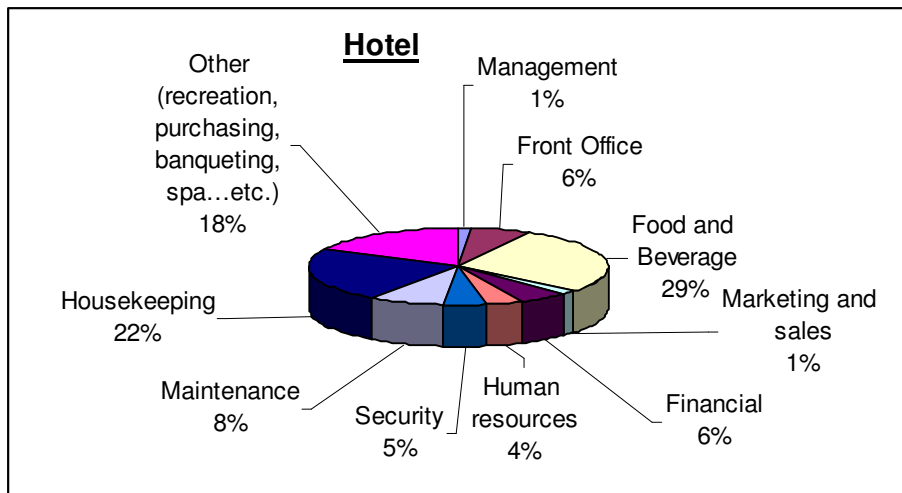


Figure 10: Proportion of labor demand by department in hotel



The standard and commonly practiced labor demand of the hotel according to positions and departments is illustrated in the following tables:

Table 38: Labor demand by position in the Financial department of a 4-star Hotel

Position	No. of Employees	%
Director of Finance (Financial controller)	1	5
Purchasing	1	5
Cost controller	1	5
General Cashier	1	5
Credit Supervisor	1	5
Accounting Office Manager	1	5
Chief Accountant	1	5
Collector	1	5
Store keeper	2	10
Store worker	2	10
Cashier	8	40
Total	20	100%

Table 39: Labor demand by position in the Human Resources department of Hotel

Position	No. of Employees	%
Human Resources Manager	1	5.9
Training Executive	2	11.8
Govt. Relations Officer	2	11.8
Secretary - HR & Training	1	5.9
Transportation	6	52.9
Accommodation	2	11.8
Total	14	100

Table 40: Labor demand by position in the Front Office department of Hotel

Position	No. of Employees	%
Front Office Manager	1	5.0
Front Desk Manager	1	5.0
Bell Boy	3	15.0
Hostess	2	10.0
Operator	2	10.0
Reservation agent	2	10.0
Night Auditor	6	30.0
Receptionist	3	15.0
Total	23	100

Table 41: Labor demand by position in the Food and Beverage department of Hotel

Position	No. of Employees	%
Waiter/Waitress	10	9.8
Executive Chef.	1	1.0
F&B manager	1	1.0
Others	90	88.2
Total	102	100

Table 42: Labor demand by position in the Housekeeping department of Hotel

Position	No. of Employees	%
Director of Services	1	1.3
Housekeeping Manager	1	1.3
Housekeeping Supervisor	1	1.3
Housekeeping Coordinator	3	3.8
Room Attendant	20	25.0
Public Area Attendant	10	12.5
Locker Attendant	5	6.3
Laundry Supervisor	2	2.5
Uniform Supervisor	2	2.5
Tailor	10	12.5
Laundry Attendant	10	12.5
Floor Runners	10	12.5
Other	5	6.3
Total	80	100

Table 43: Labor demand by position in the Maintenance department of Hotel

Position	No. of Employees	%
Technicians	28	93.3
Chief Engineer	1	3.3
Maintenance manager	1	3.3
Total	30	100

The above tables indicate that there is a high diversity of jobs and positions within each department in the hotel, which also means the wide variety and range of required skills among needed workforce.

Another observation is that most jobs require vocational skills, and may be suitable for inexperienced unemployed young people. This means that there is a significant opportunity to absorb the workforce.

The labor demand in the call centers according to positions and departments is illustrated in the following tables:

Table 44: Labor demand by position in the Management department of call centers

Position	Total employees	Average	%
Reception	3	1	10
Office Manager	9	3	30
General Manager	3	1	10
Customer Operation Manager / Contact Center Manager	3	1	10
Personal Assistant / Office facilities / secretaries	12	4	40
Total	30	10	100

Table 45: Labor demand by position in the Operations department of call centers

Position	Total employees	Average	%
Call Center Advisor / Customer Service Representative	2028	676	90.37
Call Center Supervisor / Customer Service Team Leader	57	19	2.54
Sr. Call Center Advisor / Customer Service Supervisor	129	43	5.75
OSC Associate	12	4	0.53
Support Area Supervisor	6	2	0.27
Workforce Management	12	4	0.53
Total	2244	748	100

Table 46: Labor demand by position in the Quality Assurance department of call centers

Position	Total employees	Average	%
QA Analyst	27	9	50.00
QA Supervisor/ monitor	12	4	22.22
Coaching	15	5	27.78
Total	54	18	100

Table 47: Labor demand by position in the Commercial and Marketing department of call centers

Position	Total employees	Average	%
Marketing Director	3	1	20
Sales Representatives	6	2	40
Business Development Manager	3	1	20
Public Relation	3	1	20
Total	15	5	100

Table 48: Labor demand by position in the Financial department of call centers

Position	Total employees	Average	%
Financial Manager	3	1	25
Accountant	6	2	50
Auditor	3	1	25
Total	12	4	100

Table 49: Labor demand by position in the Human Resources and Training department of call centers

Position	Total employees	Average	%
HR Manager	3	1	8.33
HR Associate / Administration Affairs Officer	15	5	41.67
Payroll Officer	6	2	16.67
Training Manager	3	1	8.33
Trainer	9	3	25.00
Total	36	12	100

Table 50: Labor demand by position in the Other departments of call centers

Position	Total employees	Average	%
Telephony Manager	3	1	25
IT Administrator	3	1	25
Driver	6	2	50
Total	12	4	100

In the call centers, the most important department for labor is operations, since it employs and trains young and fresh graduates with language proficiency and fluency, as well as more senior account managers. It was noted that the labor demand in terms of gender is equal for most of the jobs.

14. LABOR DEMAND BY JOB CRITERIA

In terms of labor demand profile, some criteria were used to define attributes of each position. Based on these criteria, companies described the required capacities, capabilities, qualifications, traits and skills that should be available for future employment according to current status.

The labor profile (job description) of the different positions can be summarized in the following graphs:

Figure 11: Distribution of Jobs by Work Location in the Hotel

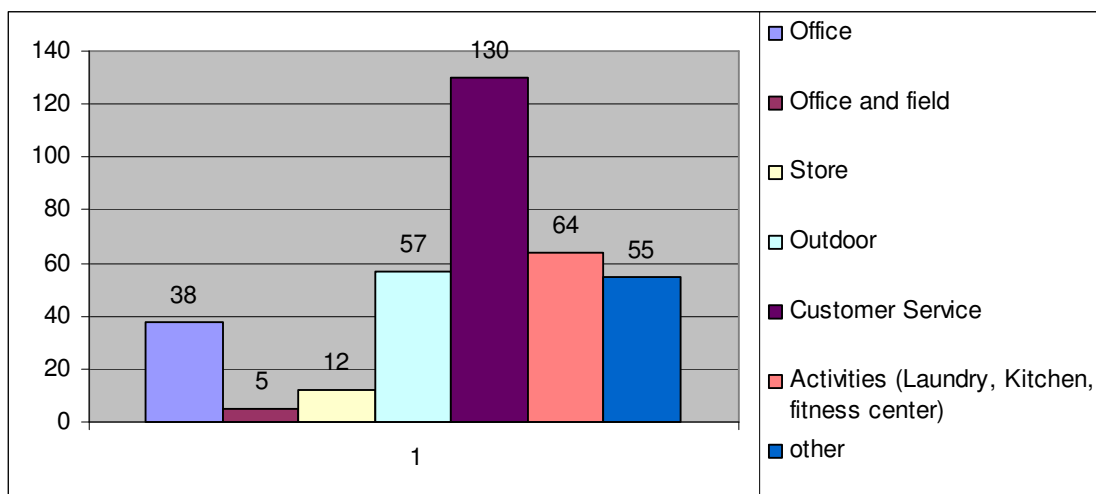
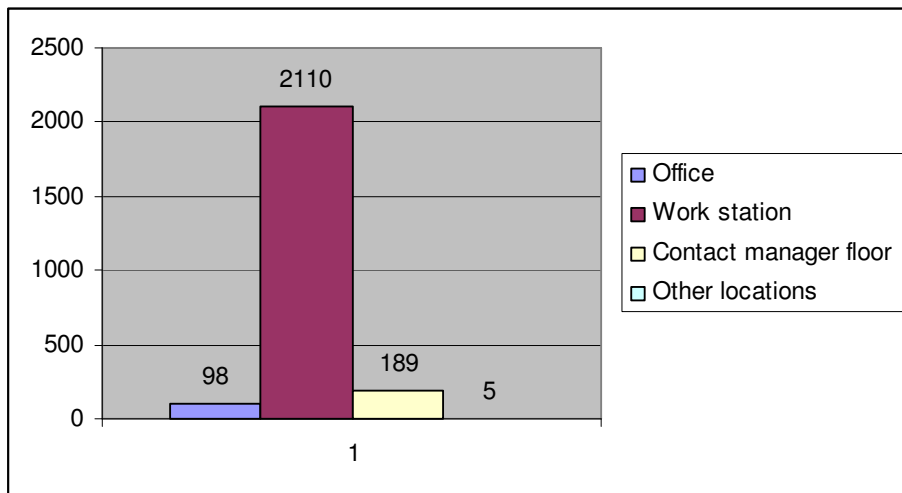


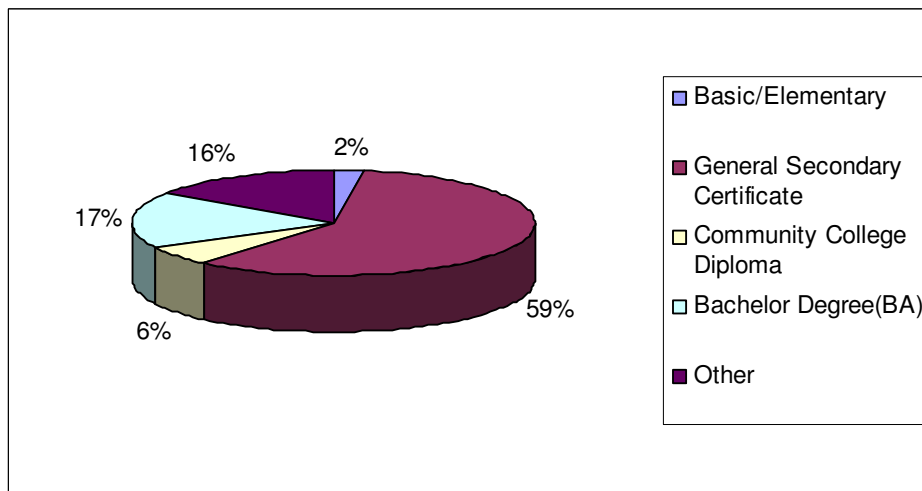
Figure 12: Distribution of Jobs by Work Location in the call centers



Most of the jobs in the hotel and the call centers are located in the offices behind a desk, which means that vocational jobs are limited.

Most of the technical jobs inside a hotel need qualified (trained) employees, and those jobs that require general secondary certificate holders represent 59% of the jobs, and 17% of the jobs require bachelor degree holders, while employees that need other education skills such as (vocational training) and no experience at all are 16 % of the total jobs.

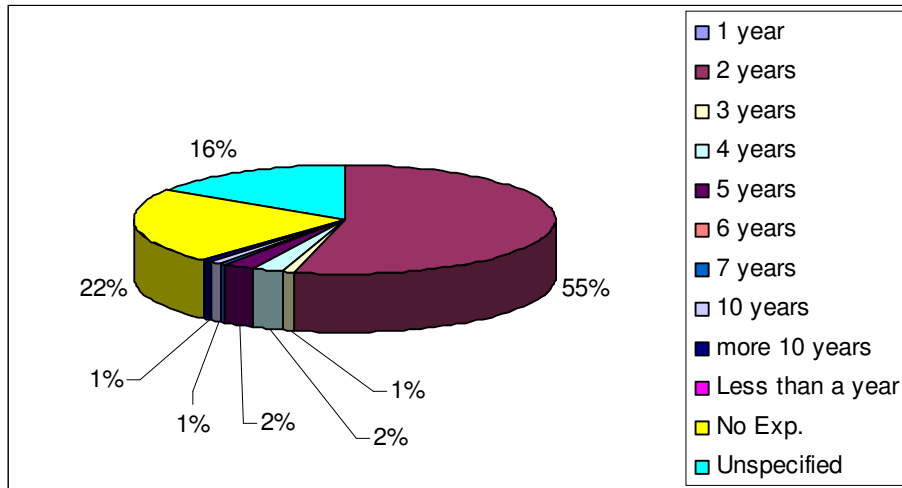
Figure 13: Distribution of Jobs by Required Education Level in the hotel



As for the call centers, all the departments require bachelors degree educated employees as minimum, except for the operations department (which consist of 93% of total jobs) which require outstanding language skills (native is preferable), personal traits and skills more than academic education.

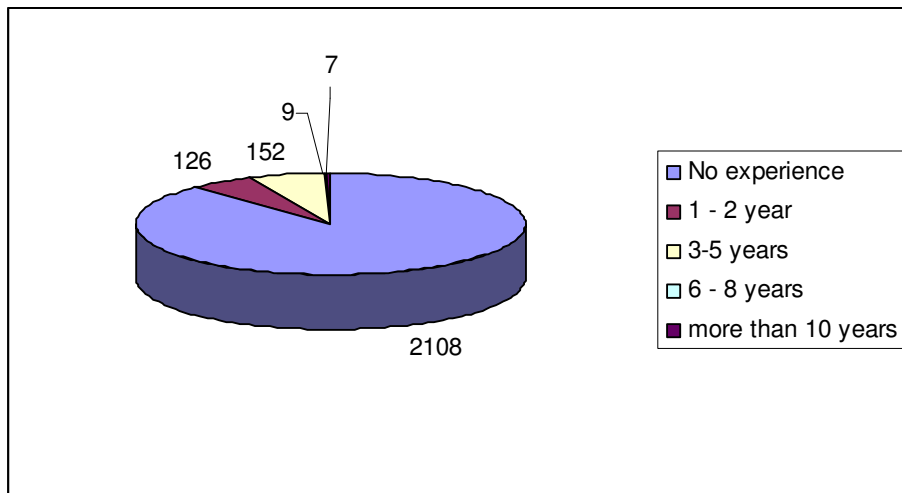
Almost 55% of the hotel employees require no less than 2 years of experience, while 22% require no experience at all, and the rest of the employees require varied experiences in the field, which is between a year and 10 years of experience.

Figure 14: Distribution of Jobs by Required Years of Experience in hotel



BPOs or Call Centers require no experience in the operations department, which will consist of the majority of labor demand, where the minority of jobs requires 1 to 5 years of experience, and only few positions jobs require 6 to 10 years of experience to fill senior positions.

Figure 15: Distribution of Jobs by Required Years of Experience in call centers



Another essential aspect of the labor demand profile is competency. There are a number of competencies related to each job that enable the employee to fulfill the job's tasks effectively, and retain the position for long time. The hotel classified its labor demand according to required competencies as follows in table 48:

Table 51: Required Job Competency Matrix for hotel

Competencies	Management	Front office	Food and Beverage	Marketing and Sales	Financial	Human resources	Security	Maintenance Dept.	House keeping	Other
Arabic and English	x	x		x	X	x				
Other languages	x	x								
Work habits	x		x				x	x	x	
Interpersonal and team skills	x	x	x	x	X	x	x	x	x	x
Social skills	x	x	x	x		x		x	x	

Acquiring and using information	x	x			X					
Managing time wisely	x	x	x	x	X	x	x	x	x	x
Computer Literacy/skills	x	x			X	x				
Technical skills specific to the job	x		x	x	X		x	x	x	
Commitment	x						x	x	x	

As for the call centers, mostly the operations and quality assurance departments require all the listed competencies as these departments are what the call centers are focused in (table 49).

Table 52: Required Job Competency Matrix for call centers

Department	Management/ administration	Operations	Quality Assurance	Commercial/ marketing	Financial	Human Resources / development and training	Technical Maintenance
Arabic and English	x	x	x	x	x	x	x
Other languages		x	x				
Work habits	x	x	x			x	x
Interpersonal and team skills	x	x	x	x		x	x
Social skills	x	x	x	x		x	
Acquiring and using information	x	x	x	x		x	
Managing time wisely	x	x	x	x		x	x
Computer Literacy/skills	x	x	x				x
Technical skills specific to the job	x	x	x	x		x	x
Commitment	x	x	x	x	x	x	x

As can be seen in the above matrix, most of the jobs in all departments concentrate on time management, interpersonal skills and technical skills specific to the job.

In terms of labor recruitment, both hotels and call centers face difficulty and relatively high cost to attract and employ workforce. It is a continuous process in these two sectors due to the normal high turnover of employees in these jobs.

Table 53: Difficulty and Cost of Labor Recruitment in Hotel

Department	Cost of Recruitment	Recruitment Method	Recruitment Difficulty	Recruitment Process Duration
Management	More than 2000 JD	Internet	Great difficulty	More than 6 months
Food Chefs	More than 2000 JD	Internet	Great difficulty	More than 6 months
Front office	100 - 500 JD	Newspaper	Some difficulty	2 months
Food and Beverage	100 - 500 JD	Newspaper	Some difficulty	1 month
Marketing and Sales	100 - 500 JD	Newspaper	Some difficulty	1 month
Financial	100 - 500 JD	Newspaper	Some difficulty	1 month
Human resources	100 - 500 JD	Newspaper	Some difficulty	1 month
Security	Less than 100 JD	Newspaper	No difficulty	1 - 3 weeks
Maintenance Dept.	100 - 500 JD	Newspaper	Some difficulty	1 month
House keeping	Less than 100 JD	Newspaper	No difficulty	1 - 3 weeks
Other	100 - 500 JD	Newspaper	Some difficulty	1 month

As indicated in the above table, hotel find great difficulty and usually spend great amount of money on recruiting top management such as (General Manager, Financial Manager. etc), and on recruiting food chiefs, also a different recruitment method (internet) is used on finding candidates to fill in such positions. While like other firms, the recruitment process is almost

the same for every position required, which depends on the education level, years of experience and salary.

Table 54: Difficulty and Cost of Labor Recruitment in Call Centers

Department	Cost of Recruitment	Recruitment Method	Recruitment Difficulty	Recruitment Process Duration
Management/ administration	500 - 1000 JD	Employment agencies / News paper / Internet / Referral	Great difficulty	4 month
Operations	100 - 500 JD	Employment agencies / News paper / Internet / Referral	Some / Great difficulty	less than a month - 2 month
Quality Assurance	100 - 500 JD	Employment agencies / News paper / Internet / Referral	Some difficulty	1 month
Commercial/marketing	100 - 500 JD	Employment agencies / News paper / Internet / Referral	Some difficulty	1 month
Financial	100 - 500 JD	Employment agencies / News paper / Internet / Referral	Some difficulty	2 month
Human Resources / development and training	500 - 1000 JD	Employment agencies / News paper / Internet / Referral	Great difficulty	3 month
Technical Maintenance	100 - 500 JD	Employment agencies / News paper / Internet / Referral	Some difficulty	1 month
Other (Drivers, Security...etc)	Less than 100 JD	Newspaper	No difficulty	Instant

Call centers find great difficulty in recruiting management and human resources and trainers, while they find some difficulty in recruiting the rest of their staff except for jobs such as drivers and security. This because of the language-based recruitment in the operations. Employees are recruited through Employment agencies / Newspaper / Internet / Referral of a person, with an average time of 2 months of recruiting process.

The survey showed that all the jobs need full time labor, with a minimum of three months probation periods for all jobs. The call centers and hotel operate under the shifts system, therefore more labor is demand to fill the same positions during all shifts.

According to the survey, almost all of the jobs offer the same package of benefits and incentives for employees including (social security, medical insurance, and transportation/housing).

The labor demand profile was also assessed in terms of salary scale. Most of the companies consider their salary scales as confidential information, some of them refused to disclose it. The estimated salary scale of the labor demand is illustrated in the following tables:

Table 55: Labor demand by salary scale in hotel

Table 55	
Labor Demand by Salary Scale in 4 star hotel	
Salary Scale (JD)	% of Jobs
Less than 200	39.3
200 - 300 JD	28.0
300 - 400 JD	10.2
400 - 500 JD	0.8
500 - 600 JD	1.9
600 - 700 JD	0.6
700 - 800 JD	0.3
800 - 900 JD	0.3
900 - 1000 JD	0.3
1000 - 1500 JD	1.4
2000 - 2500 JD	0.6
2500 - 3000 JD	0.6
4500 - 5000 JD	0.3
Unspecified	15.5
Total	100%

It is observed that most of the jobs offer less than 200 JD as basic salary in the hotel, but comply with the minimum wage stipulated by MOL. A significant proportion of jobs (38%) offer a salary ranging between 200 JD and 400 JD, which is considered financially adequate for most of the workforce in Irbid. These salaries receive additional incentives, overtime and service charge in the hotels sector.

Table 56: Labor demand by salary scale in call centers

Table 56	
Labor Demand by Salary Scale in call centers	
Salary Scale (JD)	% of Jobs
Less than 200	0.25
200 - 300 JD	1.22
300 - 400 JD	85.17
400 - 500 JD	5.93
500 - 600 JD	0.87
600 - 700 JD	2.04
700-800	4.00
1000 - 1500 JD	0.12

1500 - 2000 JD	0.12
2000 - 2500 JD	0.25
Total	100%

As for the call centers, more than 85% of the jobs offer between 300-400 JD in the operations department, while the next highest salary scale is 400-500 JD with almost 6% of the total jobs, particularly high ranking positions. In general, call centers offer well-paying jobs more than hotel.

15. TRAINING PROVIDERS IN IRBID

GOVERNMENTAL:

There are a number of governmental training providers including vocational training centers and colleges in Irbid. These institutions usually provide various training topics and courses to develop knowledge and skills of participants. The training programs offered by these institutions include business skills, vocations skills, computer skills, language skills, commercial skills and others. The names and addresses of these institutions are listed in the annex 2.

PRIVATE:

There are many private institutes and centers which provide a range of vocational and IT training in Irbid. The names, addresses and main training programs of these institutions are listed in the annex 2.

OTHER:

There is a specialized training center established at Irbid Chamber of Commerce and supported by USAID Jordan Economic Development Program-SABEQ since 2009. The center offers regular and demand-driven training courses in the fields of computer, graphic design, management and soft skills to bridge the gap between the academic outputs and labor market needs.

GAP ANALYSIS OF LABOR DEMAND AND SUPPLY

IDA was created with an aim to utilize the highly-educated and qualified human resources in certain specializations which are available in Irbid governorate. Since the labor supply study has provided statistics mainly regarding the educational qualifications and the employed workforce, the gap analysis is based on the comparison of qualifications and specializations of the expected labor demand with that of labor supply. The following analysis indicates **high match** between labor supply and demand in all fields and areas chosen by IDA.

Table 57: Labor supply and demand analysis of Technology and Telecommunication sector

Table 57 Technology and Telecommunications labor supply and demand in Irbid			
Economic Sub-Activity	Position	Demand	Supply
Computer hardware	Maintenance manager Maintenance technician Maintenance engineer Network technician Network engineer	B.Sc. computer engineering B.Sc. computer science MA computer and IT Diploma IT and computer	Universities of Irbid graduate IT and communication specializations engineers and technicians holding all academic degrees including

Computer software	Project manager Team leader Programmer Quality control System administrator Technical writer	B.Sc. Software engineering B.Sc. computer science MA computer and IT Diploma IT and computer	B.Sc, higher diploma, masters and PhD. Demand matches supply of the available specializations in Irbid governorate including: <ul style="list-style-type: none"> - Computer networking systems - Education computer - Software Engineering - Applied Computer Science - Actuarial Science - Information System - Computer Science - Information Tech. - Tech. of computer & control - Communication Eng. - Computer Systems Eng. - Electrical & Communications Eng. - Computer Eng. - Telecommunication & Software Eng. - Electrical & Computer Eng. - Graphic Design - Business Inform. Systems - Management Information Systems - Business Networking & Systems Management <p>The gap in web development and design specializations can be covered by graphic design specialization available in Irbid.</p>
Information Technology services	IT Manager System Analyst Software engineer IT Admin	B.Sc. Information technology MA computer and IT Diploma IT and computer	
Internet and E-commerce services	Web design Web Development Internet/Intranet Administrator	B.Sc. Web development B.Sc. Web design MA computer and IT Diploma IT and computer	
Telecommunication	Telecommunication engineering Wireless administrator Networking	B.Sc. telecom engineering B.Sc. Networking MA computer and IT Diploma IT and computer	
Quantitative match / gap between supply and demand		2,400 opportunities in the BPO only Undetermined opportunities in the ICT	10,676 university BA graduates, 1,288 Diploma graduates 1,178 IT university graduates, 236 IT Diploma graduates

In the case of BPOs, this type of industry focuses on language skills rather than educational qualifications of specializations. Although literature and languages graduates represent the direct target segment for BPOs, there is a great opportunity for other graduates only if they master certain language, regardless their academic specialization.

Table 58: Labor supply and demand analysis of Health and Science sector

Table 58			
Health and Science labor supply and demand in Irbid			
Economic Sub-Activity	Position	Demand	Supply
Biotechnology	Project director Laboratory technician R&D scientist Formulation scientist Infection control practitioner Drug analyst Clinical data manager Quality control officer	B.Sc., MA and PhD in life sciences including biology, chemistry, environment, medicine, pharmacy and others.	Universities, community colleges and even vocational training centers in Irbid offer many medical and health specializations. In addition, the healthcare institutions in Irbid employ experienced staff that cover most of the medical specializations. Demand matches supply of health and science workforce in the following specializations: <ul style="list-style-type: none"> - Psychology - Biology - Chemistry - Laboratory - Optical Technology - Radiological technology - Radiograph Medical Technology - Allied Dental Sciences - Health Services Administration - Dental Technology - Occupational Therapy - Physiotherapy - Medical Physics - Clinical Nutrition - Medical Laboratories - Nursing - Pharmacy - Dentistry - Medicine & Surgery - Medical Engineering - Chemical Engineering - Nutrition and Food Processing - Biomedical Engineering - Biosystems Engineering - Chemical Pharmaceutical Engineering All required specializations by IDA in the field of health and science can be provided by Irbid governorate, except rare and specific specializations (e.g. genetics), which are determined by the potential investor or project once the project starts operating in IDA.
Medical/Hospital services	Doctor Nurse Surgeon Medical support	B.Sc. Medicine B.Sc. Nursing B.Sc. Surgery B.Sc. Biology / Chemistry MA Medicine / Pre Medicine	
Pharmaceutical services	Pharmacist Drug specialist Nutritionist	B.Sc. Pharmaceuticals B.Sc. Biology / Chemistry MA Medicine / Pre Medicine	
Science R&D services	Drug research and development	B.Sc. Biology / Chemistry B.Sc. Medicine MA Medicine / Pre Medicine	
Medical laboratory services	Medical laboratory analysis	B.Sc. Biology / Chemistry B.Sc. Medical laboratory MA Medicine / Pre Medicine	
Quantitative match / gap between supply and demand		Undetermined opportunities	1,624 health, medical and science university graduates, 521 medical and nursing Diploma graduates

Table 59: Labor supply and demand analysis of business support services sector

Business support and financial labor supply and demand in Irbid			
Economic Sub-Activity	Position	Demand	Supply
Accounting/Auditing services	Financial Manager Financial Controller Internal Auditor	B.Sc. Accounting B.Sc. Finance MA Accounting, Finance, Audit Diploma Accounting/Finance	Universities and community colleges in Irbid qualify graduates in numerous commercial and financial specializations. There are adequate financial institutions and services in Irbid which employ experienced staff. In addition, many of the workforce specialized in financial services hold additional qualifications (CPA, CIA) other than the academic degree. Demand matches supply of the financial and commercial workforce in the following specializations:
Stock Exchange and financial investment	Broker Financial analyst Portfolio manager	BA Business Administration BA Marketing BA and MBA international trade / marketing BA and MBA financial management	- Accounting Information Systems - Financial & Business Economics - Business Information Systems - Insurance & Risk Management - Management Information Systems - Banking Management - Business Networking & Systems Management
Banking services	Banking clerk Investment Sales and Advisory Financial analyst Sales	B.Sc. Business management B.Sc. Accounting/ Finance MA Banking/Finance	- Finance - Marketing - Financial banking - Science - Business Administration
Credit and finance services	Financial controller Financial Analyst Accountant Credit Administrator	B.Sc. Business management B.Sc. Accounting/ Finance MA Banking/Finance	- Accountancy - Sales - Statistics
Insurance services	Risk management Sales Insurance Coordinator	B.Sc. Sales B.Sc. Finance / Business MA Banking/Finance	Usually potential financial services projects or investments demand the basic specialization of the workforce, and then they build the capacity of the workforce using their own operational systems and methods. For example, brokers usually have a basic degree in finance or business administration, and then are trained on the brokerage and stocks exchange system and procedures.
Business support services	Marketing Administration Business development	B.Sc. Marketing B.Sc. Finance / Business MA Business/Finance	
Consulting services	Financial consulting Management consulting Investment consulting Marketing consulting Training	B.Sc. Business management B.Sc. Finance / Business MA Business/Finance	
Customer service	Key account manager Sales Account executive Customer care	B.Sc. Business administration B.Sc. Sales MA Business/Sales	
Procurement Contracts/Purchasing services	Procurement officer Purchase coordinator	BA Finance & Accounting BA Business Administration	

Quantitative match / gap between supply and demand	Undetermined opportunities	1,603 business administration and finance university graduates, 346 business Diploma graduates
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Table 60: Labor supply and demand analysis of Education sector and hotel

Table 60			
Education and hotel labor supply and demand in Irbid			
Economic Sub-Activity	Position	Demand	Supply
Education	School/college principal School/college teachers School/college administrators	BA and MA in education sciences and other specializations	Universities and colleges in Irbid graduate teachers and instructors in different fields of education.
Quantitative match / gap between supply and demand		Undetermined opportunities	3,355 education and other fields university graduates, 306 education Diploma graduates
Hotel	F&B staff Front office Services staff Marketing and sales staff Financial staff	Focuses on BA for managerial positions, and college diploma and VTC for operational and service positions.	Universities offer tourism specialization in the business management field. On the other hand, there is a lack in the number of hotel specializations in the colleges and VTCs in Irbid. In general, there is a gap in the labor supply for hotel industry in Irbid.
Quantitative match / gap between supply and demand		361 opportunities in one hotel	88 hotel management and tourism university graduates only

For the hotel project, the analysis shows that there is a gap in the supply due to limited graduates and workforce specialized in hospitality and tourism in Irbid.

As a result of the above analysis, it can be concluded that there is a high level of match between the demand and supply of workforce in IDA and Irbid governorate in terms of academic qualifications and specializations. Further information is required in case there is a need for gap analysis of the skills, attitudes, preferences and salaries of workforce demand and supply.

16. CONCLUSIONS

1. Irbid population offers significant quantity of young workforce, where males are more economically active and employed than females.
2. Higher education graduates in Irbid are specialized in relevant fields as targeted by potential investors of Irbid Development Area (IT, Engineering, Education, Financial).
3. Availability of faculty in Irbid leads to the highly qualified workforce, that is needed in IDA. Faculty can support the R&D efforts of IDA investments.
4. Limited demand on community colleges (technical diploma) among potential workforce in Irbid.
5. Most of the faculty of community colleges in Irbid have an average level of education (Bachelor and Diploma) while only few of them hold higher degrees (Masters and PhD). This may be reflected on the community colleges graduates.
6. Most of the VTC graduates in Irbid are trained in irrelevant fields to the IDA, except Information Technology and graduates which are mostly females.
7. Limited information is available regarding the employed workforce in Irbid.
8. The experienced workforce employed in the different sectors in Irbid is limited, which might lead to a shortage or a gap in the supply of experienced human resources to IDA in certain fields (e.g. Banking, Insurance, Healthcare).
9. Although most of the industrial workforce in Irbid is concentrated in irrelevant fields of industry compared to IDA, there is a significant segment that works in the electronics and IT industry.
10. The healthcare staff available in Irbid consists of many specializations and represent a good supply of qualified professionals in the healthcare and medical sector.
11. The employment of job seekers is relatively weak compared to the number of applicants at the employment office in Irbid.
12. The collected secondary data of labor force lacks the specific characteristics such as the social status, training records, personal skills, job preferences, desired benefits, acceptable salaries and other important aspects of the workforce.
13. Limited information is available about the plans and needs of potential IDA investors.
14. There is a significant match between labor demand and supply in terms of academic qualifications and specializations (quality) according to the available information.

17. RECOMMENDATIONS

1. Building a comprehensive data base containing all basic statistics of the population and workforce in Irbid to be updated annually. A virtual network of official organizations and institutions should be designed and activated to serve this purpose.
2. Developing university graduates traceability system or unit at Irbid universities to collect information and track the status of graduates in terms of employment, work experience and location after entering the labor market.
3. Reconsidering and restructuring the educational programs and specializations provided by Irbid's educational and training institutions in order to serve the needs of the IDA investors. In particular, more focus should be put on graduating workforce in the fields of IT, Trade, Finance and Healthcare.
4. Conducting detailed study or survey to compensate for the missing criteria of the workforce including current situation, job satisfaction, preferences and income if these indicators are seen necessary by the IDA.
5. Further information and research on the concepts, activities, needs and demand of companies of IDA should take place in order to define the labor demand accurately.
6. Establish cooperation agreements with public and private training providers in order to modify their programs according to the needs of the workforce and the IDA potential investors. This requires more focus on advanced technical training on ICT and health services, in addition to introduction of new language courses responding to the needs of call centers.

18. ANNEXES:

Appendix 1: Bachelor degree graduates of Irbid universities

Annex 2: Training Providers in Irbid

Appendix 1: Bachelor degree graduates of Irbid universities

(1) Bachelor degree graduates by gender and specialization - Al Yarmouk University												
Year	2005-2006				2006-2007				2007-2008			
Specialization	Total	Female	Male	Irbid resident	Total	Female	Male	Irbid resident	Total	Female	Male	Irbid resident
English Language\IT												
Qura'n Readings												
Economic & Islamic Finance	43	28	15		30	15	15	18	62	43	19	42
Islamic Studies	71	64	7		96	85	11	69	100	88	12	48
Philosophy												
Sharia'												
Arts and Cultural studies												
Jurisprudence	0	0	0		44	32	12	27	43	35	8	29
Jurisprudence And Legislation	80	48	32		0	0	0		0	0	0	
Fundamentals of religion	58	42	16		54	35	19	35	62	45	17	37
Archaeology	37	23	14		24	18	6	16	43	27	16	26
History	34	18	16		39	27	12	18	29	21	8	16
French Language												
Language	111	77	34		102	79	23	58	118	93	25	70
English Language\translation												
English Language	266	199	67		251	188	63	151	323	241	82	196
Arabic Language	176	100	76		170	108	62	97	154	112	42	106
Education & Child Education												
Vocational Education Teacher												
Education												

Social Services												
Child care												
Child Education	173	159	14		292	262	30	198	230	220	10	152
Counseling	72	60	12		97	79	18	62	135	97	38	79
Field Teacher	81	62	19		9	6	3	5	7	5	2	3
Classroom teacher	345	284	61		355	296	59	238	473	409	64	339
Class, Field Teacher \Qualification	8	6	2									
Vocational Education												
special Education												
Tourist Guidance												
Museum & Heritage Administration	0	0	0		42	31	11	19	31	26	5	21
Conservation of Archaeology	32	25	7		0	0	0		0	0	0	
Law	119	34	85		114	35	79	34	91	26	65	46
International Relations \ French Language												
Family Studies												
Anthropology	29	26	3		21	14	7	13	40	33	7	27
International Relations \ Strategic Studies												
Geography	134	104	30		138	108	30	104	88	72	16	56
Psychology												
Sociology	21	18	3		28	27	1	19	31	25	6	24
Spatial Planning												
Political Science	41	18	23		29	15	14	10	25	13	12	12
Economics	36	17	19		17	12	5	10	41	24	17	13
Optical Arts												
Graphic Design												
Ceramic & Arts												

Islamic Arts												
Plastic Arts	27	24	3		23	19	4	14	19	18	1	9
Drama	20	9	11		8	2	6	5	10	4	6	6
Internal Design	58	32	26		44	27	17		61	28	33	
Music	27	18	9		9	6	3	6	12	10	2	8
Physical education	121	71	50		138	80	58	75	167	94	73	91
Library												
Journalism Media	74	47	27		51	28	23	17	64	36	28	22
Accountant Information Systems												
Financial & Business Economics	25	15	10		23	12	11	16	21	12	9	5
Business Inform. Systems												
Insurance & Risk Management												
Management Information Systems	0	0	0		92	60	32	51	100	70	30	52
Banking Management												
Business Networking & Systems Management												
Finance												
Hotels & Tourism management												
Marketing	82	25	57		68	13	55	24	64	15	49	35
Hotel management												
Hospitals Management												
Financial banking Science	122	56	66		116	55	61	60	126	67	59	58
Public administration	39	22	17		28	14	14	11	37	27	10	21
Business Administration	46	25	21		71	43	28	30	77	43	34	36
Accountancy	192	40	152		176	53	123	73	200	49	151	75
Computer Networking Systems												
Educational Computer												

Software Engineering												
Applied Computer Science												
Actuarial Science												
Information System	111	63	48		123	71	52	80	148	79	69	88
Computer Science	104	51	53		115	65	50	70	142	88	54	89
Information Tech.												
Statistics	27	17	10		21	14	7	14	27	19	8	18
Mathematics	95	59	36		100	76	24	68	131	93	38	88
Environment Science								18				23
Microbiology												
water and environment Man.												
Bio- Technology												
Lands & Water Management												
Geology	30	20	10		30	24	6		32	22	10	
Biology	73	48	25		50	39	11	28	44	37	7	20
Physics	64	40	24		57	37	20	34	95	55	40	43
Chemistry	63	45	18		76	48	28	35	68	45	23	35
Laboratory												
Optical Techniques												
Radiology techniques												
Radiograph Medical Technology												
Allied Dental Sciences												
Health Services Administration												
Artificial Limbs												
Plastic Arts												
Dental Technology												

Occupational Therapy												
Physiotherapy												
Medical Physics												13
Speech Pathology & Audiology												
Clinical Nutrition												
Food & Nutrition												
Medical Laboratories												
Midwifery												
Nursing												
Pharmacy												
Dentistry												
Medicine & Surgery												
Architectural Eng.												
Autotronics												
Technology of computer & control	89	30	59		63	22	41	27	58	21	37	26
power & Electric Machines Engineering	32	6	26		38	11	27	18	53	4	49	21
Communication Eng.	73	19	54		67	16	51	21	71	21	50	28
Surveying Eng.												
Hydraulic & thermal Mechanics												
Electrical Energy Technology												
Computer Systems Eng.												
Mechatronics												
Roads, Bridges, Airport												
Chemical Industrial Technology												
Mining Eng.												
Electrical & Communications Eng.												

Computer Eng.												
Electronics Eng	37	12	25		55	19	36	19	50	14	36	18
Medical Eng.												
Agricultural Eng.												
Industrial Eng.												
Chemical Eng.												
Mechanical Eng.												
Electrical Eng.												
Civil Eng.												
Veterinary medicine												
Agricultural Resources & Environment												
Lands, Water & Environment												
Bio- Agriculture Technology												
Forestry												
Plant protection												
Horticulture												
Soil & Irrigation												
Nutrition and Food Processing												
agricultural Economics												
Animal production												
Plant production												
Power Eng.												
Telecommunication & Software Eng.												
Heating & Cooling Eng.												
Electrical & Computer Eng.												
Environmental Eng.												

Maintenance Eng.												
Wastewater Eng.												
Biomedical Eng.												
Biosystems Eng.												
Chemical Pharmaceutical Eng.												
Total	3598	2206	1392	0	3594	2326	1268	2015	4003	2626	1377	2270

(2) Bachelor degree graduates by gender and specialization – Jordan University for Science and Technology												
Year	2005-2006				2006-2007				2007-2008			
Specialization	Total	Female	Male	Irbid resident	Total	Female	Male	Irbid resident	Total	Female	Male	Irbid resident
English Language\IT												
Qura'n Readings												
Economic & Islamic Finance												
Islamic Studies												
Philosophy												
Sharia'												
Arts and Cultural studies												
Jurisprudence												
Jurisprudence And Legislation												
Fundamentals of religion												
Archaeology												
History												
French Language												
Language												
English Language\translation												
English Language	197	136	61		125	98	27		154	108	46	
Arabic Language												
Education & Child Education												
Vocational Education												

Teacher												
Education												
Social Services												
Child care												
Child Education												
Counseling												
Field Teacher												
Classroom teacher												
Class, Field Teacher \Qualification												
Vocational Education												
special Education												
Tourist Guidance												
Museum & Heritage Administration												
Conservation of Archaeology												
Law												
International Relations \ French Language												
Family Studies												
Anthropology												
International Relations \ Strategic Studies												
Geography												
Psychology												
Sociology												
Spatial Planning												

Political Science												
Economics												
Optical Arts												
Graphic Design												
Ceramic & Arts												
Islamic Arts												
Plastic Arts												
Drama												
Internal Design												
Music												
Physical education												
Library												
Journalism Media												
Accountant Information Systems												
Financial & Business Economics												
Business Inform. Systems												
Insurance & Risk Management												
Management Information Systems												
Banking Management												
Business Networking & Systems Management												
Finance												
Hotels & Tourism management												
Marketing												

Hotel management												
Hospitals Management												
Financial banking Science												
Public administration												
Business Administration												
Accountancy												
Computer Networking Systems												
Educational Computer												
Software Engineering												
Applied Computer Science												
Actuarial Science												
Information System	4	2	2		97	46	51		0	0	0	
Computer Science	199	82	117		65	43	22		0	0	0	
Information Tech.												
Statistics												
Mathematics	92	63	29		73	50	23		68	53	15	
Environment Science	23	14	9		27	18	9		5	4	1	
Microbiology												
water and environment Man.	107	72	35		0	0	0		0	0	0	
Bio- Technology	0	0	0		103	80	23		91	67	24	
Lands & Water Management												
Geology												
Biology												
Physics	62	36	26		40	28	12		44	34	10	

Chemistry	105	72	33		77	55	22		82	46	36	
Laboratory	60	43	17		56	44	12		46	53	-7	
Optical Techniques	34	26	8		34	29	5		37	29	8	
radiology techniques	45	24	21		36	17	19		48	25	23	
Radiograph Medical Technology												
Allied Dental Sciences	54	26	28		10	8	2		11	8	3	
Health Services Administration	18	12	6		7	4	3		32	23	9	
Artificial Limbs												
Plastic Arts												
Dental Technology	0	0	0		37	22	15		37	18	19	
Occupational Therapy	13	6	7		8	3	5		34	20	14	
Physiotherapy	67	27	40		76	39	37		88	38	50	
Medical Physics												
Speed Pathology & Audiology	24	16	8		23	13	10		48	31	17	
Clinical Nutrition												
Food & Nutrition												
Medical Laboratories												
Midwifery	39	39	0		32	32	0		22	22	0	
Nursing	264	122	142		335	139	196		390	146	244	
Pharmacy	225	153	72		209	134	75		243	151	92	
Dentistry	116	62	54		115	66	49		101	57	44	
Medicine & Surgery	251	62	189		249	89	160		308	78	230	
Architectural Eng.	41	31	10		46	32	14		56	49	7	
Autotronics												

Technology of computer & control												
power & Electric Machines Engineering												
Communication Eng.												
Surveying Eng.												
Hydraulic & thermal Machanics												
Electrical Energy Technology												
Computer Systems Eng.												
Mechatronics												
Roads, Bridges, Airport												
Chemical Industrial Technology												
Mining Eng.												
Electrical & Communications Eng.												
Computer Eng.	137	32	105		97	26	71		0	0	0	
Electronics Eng												
Medical Eng.					60	23	37					
Agricultural Eng.												
Industrial Eng.	80	13	67		58	17	41		54	13	41	
Chemical Eng.	81	50	31		107	71	36		92	57	35	
Mechanical Eng.	114	8	106		133	5	128		111	5	106	
Electrical Eng.	145	24	121		94	18	76		80	19	61	
Civil Eng.	142	71	71		123	55	68		127	61	66	
Veterinary medicine	46	15	31		39	12	27		26	6	20	

Agricultural Resources & Environment												
Lands, Water & Environment	51	34	17		45	33	12		41	30	11	
Bio- Agriculture Technology												
forestry	22	8	14		20	13	7		15	12	3	
Plant protection												
Horticulture												
Soil & Irrigation												
Nutrition and Food Processing	83	61	22		72	47	25		60	47	13	
agricultural Economics												
Animal production	61	29	32		27	13	14		22	3	19	
Plant production	47	30	17		43	33	10		44	29	15	
Power Eng.												
Telecommunication & Software Eng.												
Heating & Cooling Eng.												
Electrical & Computer Eng.												
Environmental Eng.												
Maintenance Eng.												
Wastewater Eng.												
Biomedical Eng.	65	29	36		0	0	0		57	20	37	
Biosystems Eng.	47	28	19		73	49	24		64	43	21	
Chemical Pharmaceutical Eng.	0	0	0		0	0	0		0	0	0	
Total	3161	1558	1603	0	2871	1504	1367	0	2738	1405	1333	0

(3) Bachelor degree graduates by gender and specialization – Jerash Private University

Year	2005-2006				2006-2007				2007-2008			
Specialization	Total	Female	Male	Irbid resident	Total	Female	Male	Irbid resident	Total	Female	Male	Irbid resident
English Language\IT												
Qura'n Readings												
Economic & Islamic Finance												
Islamic Studies												
Philosophy												
Sharia'	74	43	31		46	19	27	8	0	0	0	
Arts and Cultural studies												
Jurisprudence												
Jurisprudence And Legislation												
Fundamentals of religion												
Archaeology												
History												
French Language												
Language												
English Language\translation												
English Language	183	95	88		213	97	116	47	185	82	103	
Arabic Language	157	95	62		67	37	30	35	120	67	53	
Education & Child Education												
Vocational Education Teacher												
Education												
Social Services												
Child care												

Child Education												
Counseling												
Field Teacher												
Classroom teacher	123	93	30		347	241	106	120	369	287	82	
Class, Field Teacher \Qualification												
Vocational Education												
special Education												
Tourist Guidance												
Museum & Heritage Administration												
Conservation of Archaeology												
Law	107	19	88		118	15	103	29	120	14	106	
International Relations \ French Language												
Family Studies												
Anthropology												
International Relations \ Strategic Studies												
Geography												
Psychology												
Sociology												
Spatial Planning												
Political Science												
Economics	3	3	0		1	0	1		0	0	0	
Optical Arts												
Graphic Design												
Ceramic & Arts												

Islamic Arts												
Plastic Arts												
Drama												
Internal Design												
Music												
Physical education												
Library												
Journalism Media												
Accountant Information Systems												
Financial & Business Economics												
Business Inform. Systems												
Insurance & Risk Management												
Management Information Systems												
Banking Management												
Business Networking & Systems Management												
Finance												
Hotels & Tourism management												
Marketing												
Hotel management												
Hospitals Management												
Financial banking Science	31	13	18		46	13	33	15	36	9	27	
Public administration	20	10	10		34	11	23	4	21	2	19	
Business Administration	50	23	27		54	17	37	20	58	16	42	
Accountancy	98	19	79		99	22	77	41	130	19	111	
Computer Networking Systems												

Educational Computer												
Software Engineering												
Applied Computer Science												
Actuarial Science												
Information System												
Computer Science	83	16	67		77	18	59	18	54	11	43	
Information Tech.												
Statistics												
Mathematics	30	17	13		39	16	23	23	45	24	21	
Environment Science												
Microbiology												
water and environment Man.												
Bio- Technology												
Lands & Water Management												
Geology												
Biology	15	6	9		9	6	3	3	8	6	2	
Physics												
Chemistry	14	9	5		10	6	4		7	4	3	
Laboratory												
Optical Techniques												
radiology techniques												
Radiograph Medical Technology												
Allied Dental Sciences												
Health Services Administration												
Artificial Limbs												
Plastic Arts												

Dental Technology												
Occupational Therapy												
Physiotherapy												
Medical Physics												
Speed Pathology & Audiology												
Clinical Nutrition												
Food & Nutrition												
Medical Laboratories												
Midwifery												
Nursing								20	6	14	9	
Pharmacy												
Dentistry												
Medicine & Surgery												
Architectural Eng.												
Autotronics												
Technology of computer & control												
power & Electric Machines Engineering												
Communication Eng.												
Surveying Eng.												
Hydraulic & thermal Machanics												
Electrical Energy Technology												
Computer Systems Eng.												
Mechatronics												
Roads, Bridges, Airport												
Chemical Industrial Technology												
Mining Eng.												

Electrical & Communications Eng.												
Computer Eng.												
Electronics Eng												
Medical Eng.												
Agricultural Eng.												
Industrial Eng.												
Chemical Eng.												
Mechanical Eng.												
Electrical Eng.												
Civil Eng.												
Veterinary medicine												
Agricultural Resources & Environment												
Lands, Water & Environment												
Bio- Agriculture Technology												
forestry												
Plant protection												
Horticulture												
Soil & Irrigation												
Nutrition and Food Processing												
agricultural Economics	13	1	12	3	7	1	6		19	1	18	
Animal production	26	1	25	3	10	0	10		11	1	10	
Plant production	39	3	36	10	49	5	44		42	5	37	
Power Eng.												
Telecommunication & Software Eng.												

Heating & Cooling Eng.												
Electrical & Computer Eng.												
Environmental Eng.												
Maintenance Eng.												
Wastewater Eng.												
Biomedical Eng.												
Biosystems Eng.												
Chemical Pharmaceutical Eng.												
Total	1066	466	600	16	1226	524	702	363	1245	554	691	9

(4) Bachelor degree graduates by gender and specialization – Philadelphia University

Year	2005-2006				2006-2007				2007-2008			
Specialization	Total	Female	Male	Irbid resident	Total	Female	Male	Irbid resident	Total	Female	Male	Irbid resident
English Language\IT												
Qura'n Readings												
Economic & Islamic Finance												
Islamic Studies												
Philosophy												
Sharia'												
Arts and Cultural studies												
Jurisprudence												
Jurisprudence And Legislation												
Fundamentals of religion												
Archaeology												
History												
French Language												
Language												
English Language\translation												

English Language	78	48	30		85	59	26		69	44	25	
Arabic Language	12	6	6		16	10	6		11	8	3	
Education & Child Education												
Vocational Education Teacher												
Education												
Social Services												
Child care												
Child Education												
Counseling												
Field Teacher												
Classroom teacher												
Class, Field Teacher \Qualification												
Vocational Education												
special Education												
Tourist Guidance												
Museum & Heritage Administration												
Conservation of Archaeology												
Law	0	0	0		174	31	143		175	21	154	

International Relations \ French Language												
Family Studies												
Anthropology												
International Relations \ Strategic Studies												
Geography												
Psychology												
Sociology												
Spatial Planning												
Political Science												
Economics												
Optical Arts												
Graphic Design	54	20	34		66	22	44		53	21	32	
Ceramic & Arts												
Islamic Arts												
Plastic Arts												

Drama												
Internal Design												
Music												
Physical education												
Library	34	27	7		49	36	13		27	17	10	
Journalism Media												
Accountant Information Systems												
Financial & Business Economics												
Business Inform. Systems												
Insurance & Risk Management												
Management Information Systems	55	7	48		0	0	0		100	14	86	
Banking Management												
Business Networking & Systems Management	167	17	150		92	16	76		64	9	55	
Finance												

Hotels & Tourism management	33	4	29		27	5	22		28	2	26	
Marketing	48	4	44		58	7	51		54	4	50	
Hotel management												
Hospitals Management	38	10	28		48	19	29		23	21	2	
Financial banking Science	52	20	32		56	25	31		35	17	18	
Public administration												
Business Administration	57	23	34		57	21	36		50	14	36	
Accountancy	189	14	175		186	15	171		165	9	156	
Computer Networking Systems												
Educational Computer												
Software Engineering	244	26	218		0	0	0		132	12	120	
Applied Computer Science	44	4	40		0	0	0		9	0	9	
Actuarial Science												
Information System	1	0	1		34	8	26		48	4	44	
Computer Science	60	10	50		46	6	40		46	7	39	
Information Tech.	0	0	0		301	36	265		0	0	0	

Statistics												
Mathematics	0	0	0		21	14	7		15	10	5	
Environment Science												
Microbiology												
water and environment Man.												
Bio- Technology	32	16	16		52	26	26		41	27	14	
Lands & Water Management												
Geology												
Biology												
Physics												
Chemistry												
Laboratory												
Optical Techniques												
radiology techniques												
Radiograph Medical Technology												
Allied Dental Sciences												
Health Services Administration												
Artificial Limbs												
Plastic Arts												

Dental Technology												
Occupational Therapy												
Physiotherapy												
Medical Physics												
Speech Pathology & Audiology												
Clinical Nutrition												
Food & Nutrition												
Medical Laboratories												
Midwifery												
Nursing												
Pharmacy	65	20	45		70	32	38		0	0	0	
Dentistry												
Medicine & Surgery												
Architectural Eng.												
Autotronics												
Technology of computer & control												
power & Electric Machines Engineering												

Communication Eng.	0	0	0		0	0	0		70	5	65	
Surveying Eng.												
Hydraulic & thermal Mechanics												
Electrical Energy Technology												
Computer Systems Eng.												
Mechatronics	22	0	22		0	0	0		53	1	52	
Roads, Bridges, Airport												
Chemical Industrial Technology												
Mining Eng.												
Electrical & Communications Eng.	55	0	55		0	0	0		0	0	0	
Computer Eng.	56	7	49		0	0	0		49	5	44	
Electronics Eng												
Medical Eng.												
Agricultural Eng.												
Industrial Eng.												
Chemical Eng.												
Mechanical Eng.	70	0	70		73	2	71		49	0	49	
Electrical Eng.	34	0	34		0	0	0		32	0	32	
Civil Eng.												
Veterinary medicine												

Agricultural Resources & Environment												
Lands, Water & Environment												
Bio- Agriculture Technology												
forestry												
Plant protection												
Horticulture												
Soil & Irrigation												
Nutrition and Food Processing												
agricultural Economics												
Animal production												
Plant production												
Power Eng.												
Telecommunication & Software Eng.												
Heating & Cooling Eng.												
Electrical & Computer Eng.												

Environmental Eng.												
Maintenance Eng.												
Wastewater Eng.												
Biomedical Eng.												
Biosystems Eng.												
Chemical Pharmaceutical Eng.												
Total	1500	283	1217	0	1511	390	1121	0	1398	272	1126	0

(5) Bachelor degree graduates by gender and specialization – Irbid National University

Year	2005-2006				2006-2007				2007-2008			
Specialization	Total	Female	Male	Irbid resident	Total	Female	Male	Irbid resident	Total	Female	Male	Irbid resident
English Language\IT												
Qura'n Readings												
Economic & Islamic Finance												
Islamic Studies												
Philosophy												
Sharia'												
Arts and Cultural studies												
Jurisprudence	37	30	7		23	18	5		0	0	0	
Jurisprudence And Legislation												
Fundamentals of religion												
Archaeology												
History												
French Language												
Language												
English Language\translation												
English Language	198	95	103		208	109	99		179	79	100	
Arabic Language	113	84	29		84	64	20		59	43	16	
Education & Child Education												
Vocational Education Teacher												

Education												
Social Services												
Child care												
Child Education												
Counseling												
Field Teacher												
Classroom teacher	0	0	0		12	10	2		27	20	7	
Class, Field Teacher \Qualification												
Vocational Education												
special Education												
Tourist Guidance												
Museum & Heritage Administration												
Conservation of Archaeology												
Law	60	17	43		68	19	49		70	17	53	
International Relations \ French Language												
Family Studies												
Anthropology												
International Relations \ Strategic Studies												
Geography												
Psychology												
Sociology												
Spatial Planning												
Political Science												
Economics												
Optical Arts												
Graphic Design												

Ceramic & Arts												
Islamic Arts												
Plastic Arts												
Drama												
Internal Design												
Music												
Physical education												
Library												
Journalism Media												
Accountant Information Systems												
Financial & Business Economics												
Business Inform. Systems												
Insurance & Risk Management												
Management Information Systems												
Banking Management												
Business Networking & Systems Management												
Finance												
Hotels & Tourism management	28	1	27		27	1	26		0	0	0	
Marketing	76	17	59		53	8	45		60	10	50	
Hotel management	0	0	0		0	0	0		29	0	29	
Hospitals Management												
Financial banking Science	65	19	46		45	24	21		45	26	19	
Public administration												
Business Administration	58	32	26		48	29	19		45	30	15	
Accountancy	102	22	80		72	19	53		76	45	31	
Computer Networking Systems												

Educational Computer											
Software Engineering											
Applied Computer Science											
Actuarial Science											
Information System	7	1	6		13	3	10		23	9	14
Computer Science	100	27	73		70	22	48		51	17	34
Information Tech.											
Statistics											
Mathematics	45	25	20		34	25	9		40	24	16
Environment Science											
Microbiology											
water and environment Man.											
Bio- Technology											
Lands & Water Management											
Geology											
Biology											
Physics											
Chemistry											
Laboratory											
Optical Techniques											
radiology techniques											
Radiograph Medical Technology											
Allied Dental Sciences											
Health Services Administration											
Artificial Limbs											
Plastic Arts											

Dental Technology												
Occupational Therapy												
Physiotherapy												
Medical Physics												
Speed Pathology & Audiology												
Clinical Nutrition												
Food & Nutrition												
Medical Laboratories												
Midwifery												
Nursing												
Pharmacy												
Dentistry												
Medicine & Surgery												
Architectural Eng.												
Autotronics												
Technology of computer & control												
power & Electric Machines Engineering												
Communication Eng.												
Surveying Eng.												
Hydraulic & thermal Machanics												
Electrical Energy Technology												
Computer Systems Eng.												
Mechatronics												
Roads, Bridges, Airport												
Chemical Industrial Technology												
Mining Eng.												

Electrical & Communications Eng.												
Computer Eng.												
Electronics Eng												
Medical Eng.												
Agricultural Eng.												
Industrial Eng.												
Chemical Eng.												
Mechanical Eng.												
Electrical Eng.												
Civil Eng.												
Veterinary medicine												
Agricultural Resources & Environment												
Lands, Water & Environment												
Bio- Agriculture Technology												
forestry												
Plant protection												
Horticulture												
Soil & Irrigation												
Nutrition and Food Processing												
agricultural Economics												
Animal production												
Plant production												
Power Eng.												
Telecommunication & Software Eng.												
Heating & Cooling Eng.												
Electrical & Computer Eng.												

Environmental Eng.												
Maintenance Eng.												
Wastewater Eng.												
Biomedical Eng.												
Biosystems Eng.												
Chemical Pharmaceutical Eng.												
Total	889	370	519	0	757	351	406	0	704	320	384	0

Annex 2: Training Providers in Irbid

Governmental:

University	Telephone numbers
Al Yarmouk University – consulting and training center	02- 7211111
Jordan University for Science and Technology – consulting and training center	02 –7201000
Philadelphia – training center	06 - 4799000
Irbid National University – training center	02- 7056680

College	Telephone numbers
Irbid college	02-7273196
Al husn polytechnic college	02-7010400
Para-medical institute	02- 7243011
Nusaybah nursing college	02- 7070475
Iben Khaldoun college	02-710-4731
Gernatah College	02-7100024

VTC	Telephone numbers
Vocational training directorate	02- 7102982
Information technology Institute	02- 7240895
Vocational training centre	02- 7200895
Vocational training centre	02- 7391121
Vocational training centre	02- 6560082
Vocational training centre	02- 7101872

Private:

There are many private institutes and centers which provide a range of vocational and IT training in Irbid. The names, addresses and main training programs of these institutions are listed in the annex.

Institute	Programs	Telephone numbers
STC center	ICDL and computer TOFEL	02-7101461 0788779955
Al Bawasel academy	Language conversation Computer courses Computer maintenance	02-7240960 0776554724
Sara International center	Hospital management Patients affairs Computer courses English language courses Other languages Computer and cellular maintenance	02-7247232
SDK center	English language courses Computer maintenance Computer courses	02-7101617 0785007973
Versai cultural center	Languages courses Programming courses	02-71045440 0785599179
Al Najjar center	ICDL and computer courses Typing Computer maintenance English language courses	02-7275702 0795199764
Sadeen center	Language courses Computer courses	0799601469 0795330415

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