JORDAN ICT & ITES SECTOR STATISTICS

2018

Prepared by the Information and Communications
Technology Association in Jordan- int@j

int@j
Information and Communications
Technology Association - Jordan

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List of Abbreviations

ICT   Information and Communications Technology

IT   Information Technology

ITES   IT Enabled Services

int@j   Information and Communications Technology Association

MoDEE   Ministry of Digital Economy and Entrepreneurship

ISIC   International Standard Industrial Classification

OECD   Organization for Economic Co-operation and Development

UNSTATS   United Nations Statistics Division

FDI   Foreign Direct Investment

Executive Summary

Information and Communication Technology (ICT) is generally the combination of Information technology (IT) and digital telecommunication. Information technology focuses on computers and related devices, and digital telecommunications, including cellphones, the internet and other digital networks. The information and communication technology (ICT) sector has played an important role in Jordan's economic growth.

Jordan is one of the fastest-growing IT markets in the region. The rapid emergence of the Jordanian IT sector has transformed Jordan economy as well as its image from a slow-moving low technology economy to a high-tech land of innovative entrepreneurs.

The country's cost competitiveness in providing Information Technology (IT) services, continues to improve and stabilize the economy with a total revenue of $749,116,414 in 2018. This sector has evolved over the past few years with main focus on IT hardware & infrastructure installation, Software development, software licenses sale, IT hardware & infrastructure wholesale, telecommunications equipment and telephones wholesale, telecommunications equipment installation and telecommunications wireless services. According to the data collected and analyzed from 603 companies currently operating in Jordan, the industry exports revenue have yielded $261,676,946 and $487,439,469 in domestic revenue. Over the last few decades, top IT companies in Jordan have become global leaders in information technology (IT) sector and contributing to the growth of technology not only in Jordan but globally.

Similarly, the telecom sector has registered a phenomenal growth during the past few years and currently a leading telecommunications market in the region with a subscriber base of 18,186,455 formed of Internet Subscribers, Mobile Subscribers and Fixed Line Subscribers.
Jordan's telecommunication sector has reached unlocking revenue of $1,423,771,401 in 2018 with 4,045 employments. It is predicted that imminent growth in telecom sector will be fueled by further and rapid diffusion of smartphones, deployment of new and emerging technologies such as 5G, Internet of Things (IoT), Data Privacy, Automation, Artificial Intelligence (AI), Blockchain and Machine-to-Machine (M2M) etc. The Jordanian telecom industry has started witnessing consolidation thus increasing the industry's efficiency to share their network coverage assets.

The spurt in growth of ICT sector in Jordan and their significant contribution to the socio-economic development of the country has compelled the Government of Jordan to create a favorable policy and regulatory environment for the further growth of these sectors. Suitable policy prescriptions by the government are necessary for ICT to become one of the key engines of economic development in Jordan.

Introduction

Jordan's information and communications technology (ICT) and IT Enabled Services (ITES)1 sectors have come a long way in the past years and have achieved a great deal of accomplishments in which we can all take great pride. Today, the ICT ecosystem in Jordan is considered as one of the most developed and robust in the region.

In spite of the rising regional competition and slower economic growth coupled with regional instability, the ICT sector continues to stand as one of Jordan's greatest strengths. To demonstrate the sector's growth in terms of numbers and to determine the growth in market size, exports, investments, and employment, the Information and Communications Technology Association of Jordan (int@j) in cooperation with the Ministry of Digital Economy and Entrepreneurship (MoDEE) have completed the ICT and ITES Sector Classification and Statistics for the year 2018 aiming to provide clear and accurate references on Jordan's ICT and ITES sectors. Striving for continuous growth of this sector, is the single minded focus on the need for development and adoption of new technologies, Standardization, Research & Development and capacity building.

Classical Framework

The International Standard Industrial Classification of All Economic Activities (ISIC) is the international reference classification of productive activities. Its main purpose is to provide a set of activity categories that can be utilized for the collection and reporting of statistics according to such activities.

ISIC is not a classification of goods and services but rather a classification according to the kind of productive activity. It is distinctively different in nature and purpose from the classifications of goods and services, ownership, institutional units or other types of classifications.

All the ICT and ITES Sector classifications in this report were mapped to the fourth revision of ISIC (ISIC, Rev.4) which is the outcome of a review process that spanned over several years and involved contributions from several classification experts and users around the world. The fourth revision of ISIC provides substantially more details at all levels than the previous versions of the classification. This increased detail responds to requests by both producers and users of statistics.

Methodology

The 2018 ICT and IT Enabled Services (ITES) Sector Classification and Statistics Survey conducted between March and June 2019 represents a holistic assessment of Jordan's Information and Communications Technology (ICT) and IT Enabled Services (ITES) industry.

The Survey was designed based on the International Standard Industrial Classification, Version 4.0 (ISIC 4.0) to provide information on the following topics:
- IT and ITES revenue domestic and export
- IT and ITES employment
- IT and ITES investments

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[1] IT enabled services are the services that make extensive use of information and communication technologies.

The survey followed a secure mechanism that ensured data confidentiality, collected by Nielsen Jordan. Data disclosed only to authorize representatives to allow aggregation and analysis of the data provided by companies. Entered data is split into two separate databases making it virtually impossible to link companies' information to their numbers for confidentiality purposes.

Survey Methodology:

- The survey followed the Organization for Economic Co-operation and Development (OECD) definition of the ICT Sector, according to the guiding principle for what constitutes an ICT enterprise is: "The production (goods and services) of a candidate industry must primarily be intended to fulfill or enable the function of information processing and communication by electronic means, including transmission and display"

- Based on the OECD definition of an ICT enterprise, ICT and ITES sector segments have been mapped to ISIC 4.0 sections

- To ensure that the survey covers all ICT and ITES companies in Jordan (100% of the sector), comprehensive lists of companies with ICT and ITES related activities were obtained from the Ministry of Industry and Trade and all Industry and Trade Chambers in Jordan (including int@j and non-int@j member companies)

- The survey was then launched and verified companies with ICT and ITES activities were visited to fill the questionnaire

- During the survey, companies confirmed whether they are actually ICT and/or ITES related companies by examining a detailed list of activities and answering specific questions.

- The survey outcomes identified the companies considered as ICT and/or ITES companies.

- Companies are classified as part of the ICT and ITES Sector if their "principal" activities belong to ISIC 4.0 ICT and ITES classes, i.e. are within the ICT and ITES classification domain.

- According to UNSTATS "An activity that contributes most to the value added of the unit, or the activity the value added of which exceeds that of any other activity undertaken by the unit is called its "principal" activity. It is unnecessary that the principal activity account for 50% or more of the total value added of a unit".

- Remaining companies, which did not complete the questionnaire, were approached individually, and asked questions, in order to identify their activities based on (ISIC 4.0) classification and provide actual number of employees. Besides, relying on historical data for companies which were not approachable at all.

- The revenues for companies which didn't fill the survey were estimated by pro-rating total numbers based on the number of those who filled the survey compared to the total number of companies.

- For accuracy purposes, statistics of Telecommunications companies were obtained from the Telecommunications Regulatory Commission (TRC), the official organization in Jordan responsible for gathering and publishing Telecom statistics. IT & ITES numbers presented in this report are the results of analyzing the figures obtained from the 2018 survey.

- All monetary values expressed in this report are in US Dollars. USD 1 = JD 0.708 is the official conversion rate when publishing this report.

Survey Sample Population

The survey initially identified 720 companies, of which 603 companies with ICT and ITES related activities in Jordan. Although there was lower than expected participation in the survey, the results presented are a reflection of the data collected from companies of the sector and aims to guide stakeholders on its performance for 2018, trends and prospects.

2018 ICT & ITES Sector Statistics

The following data focuses on five areas:

- IT/ITES revenue
- Telecommunications
- Employment
- Sector Activity

1. IT Revenue Growth (2004 – 2018)

In 2018, the total revenue registered a growth of around 10.71% to $72 million increase compared to the year of 2017. The IT & ITES revenue comprises Telecom (65.40%), IT (34.41%), ICT Training (0.18%) and ITES (0.01%). The ICT sector is a leading employer in Jordan offering 17,698 jobs in 2018.

IT & ITES SECTOR STATISTICS 2018			
	Domestic (USD)	**Export (USD)**	**Total (USD)**
Total IT/ITES Revenue			
IT Revenue	487,439,469	261,676,946	749,116,414
ITES Revenue	127,119	0	127,119
ICT Training Revenue	3,298,300	661,332	3,959,632
Total Telecom Revenue			1,423,771,401
Total Revenue			**2,176,974,566**
IT Imports Revenue			180,259,685
IT and ITES Sector Employment			13,653
Telecom Employment			4,045
ICT and ITES Sector Employment			**17,698**

Table 1: IT & ITES Sector Statistics 2018

Over the past 5 years Jordan IT Sector have grown exponentially by 37% with $202,528,266 increase of revenue. In 2018, the sector yielded an impressive $749,116,414 in revenue which is contributing to the sustainability and technological innovation of the sector.
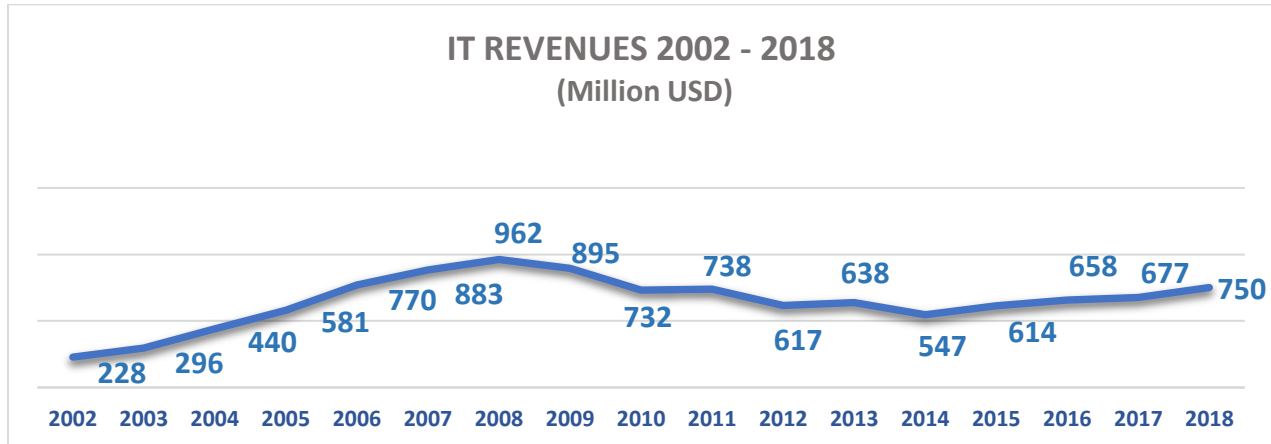
Figure 1: IT Total Revenues 2002 – 2018(million USD)

IT export revenue has reached $262 million in 2018 while domestic revenue stood at $487 million.
This means 65% of the total revenue is from local economy and 35% relies on markets abroad.
With a 19.15% growth in IT domestic revenue in the last year, the export revenue growth has declined by 2.2% requiring for the sector ecosystem to focus on its export revenue share in the coming years.

Figure 2: IT Domestic vs. Export Revenues 2002 – 2018 (Million USD)

2. 2018 Telecom Sector Statistics

The telecom sector is one of the fastest growing sectors in Jordan that has undergone an innovative stage over the past few years and has become one of the largest telecommunications market in the region. The telecom sector has assumed the position of an essential infrastructure for socioeconomic development in Jordan's increasingly knowledge based economy. As per below table, the telecom services in Jordan can be divided into four broad segments, PSTN**,** Mobile, Internet and Others.

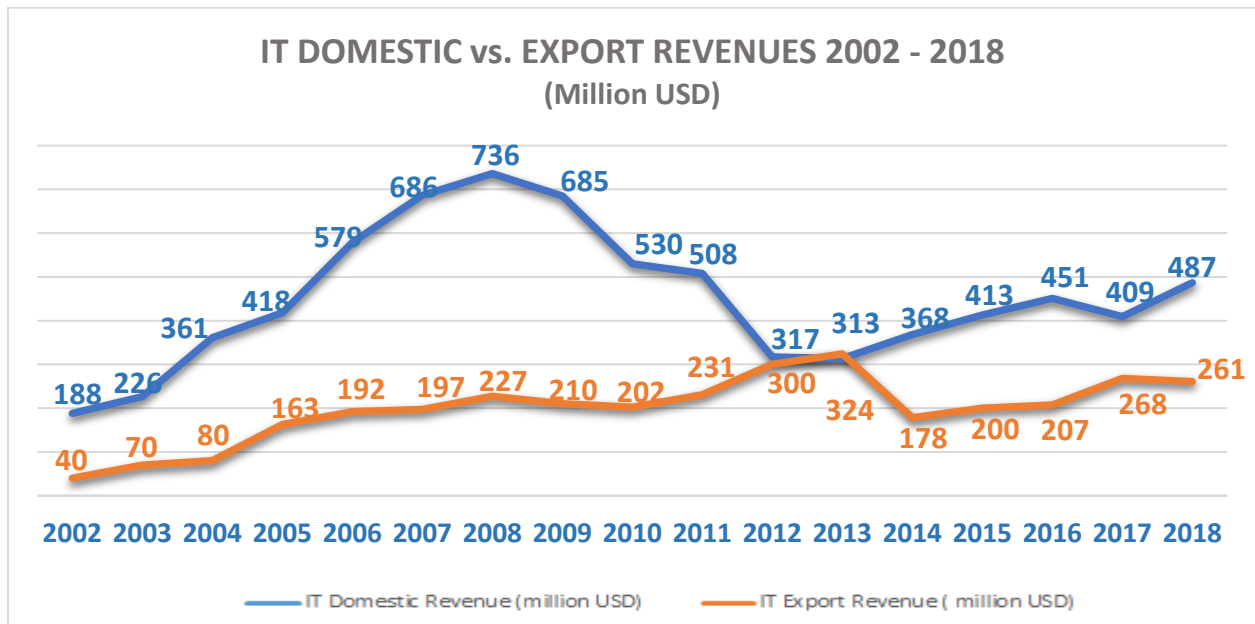| TELECOM STATISTICS 2018					
Revenues in 2018 (USD)					
PSTN					$227,718,593
Mobile					$949,932,206
Internet					$109,290,311
Other					$136,830,291
Total					**$1,423,771,401**
Penetration and Number of Subscribers in 2018					
Fixed Line Subscribers	Fixed Line Penetration	Mobile Subscribers	Mobile Penetration	Internet Users	Internet Penetration
319,040	3.10%	8,731,760	85%	9,135,455	88.80%
Total Subscribers					**18,186,255**
Annual Investment					$191,911,306
Employment					4,045

Table 2: Telecom Statistics 2018

The sector is looking to improve its internet user base and advance its telecom technologies to meet modern world needs.

With the rise in smart phone usage and increasing penetration of 4G and 3G services, the Internet user base is rapidly expanding and has reached a penetration of over 88.80% versus 50.3% penetration in China.

In 2018, telecom sector in Jordan employed 4,045 people directly. The employment opportunities are expected to be created in combination with government's efforts. Rise in mobile-phone penetration to 85% and decline in data costs is expected to increase internet users further especially with the rise of new registered enterprises.

With increasing subscriber base, there have been $192 million investments and developments in the sector.

TELECOM TOTAL REVENUE %
Other 9%
Internet 8%
PSTN 16%
Mobile 67%
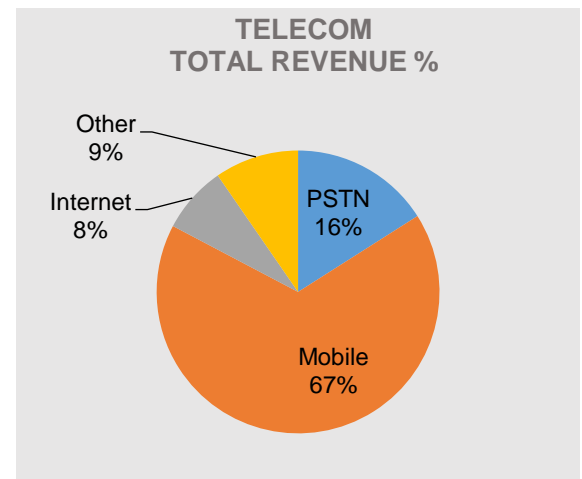
3. Telecom Growth 2010 – 2018

As a result of growth decline over the last ten years in the telecom sector, Jordan is expected to put in place recovery initiatives which will continue recent revenue improvements of 2015-2018. Over the past 4 years Jordan Telecom Sector has grown by 5% with $70,289,118 increase of revenue. In 2018, the sector revenue is $1,423,771,401 which is contributing to becoming a digital economy.

Telecom Revenues (Million USD)

	2010	2011	2012	2013	2014	2015	2016	2017	2018
	1,571	1,629	1,669	1,547	1,462	1,353	1,370	1,402	1,424
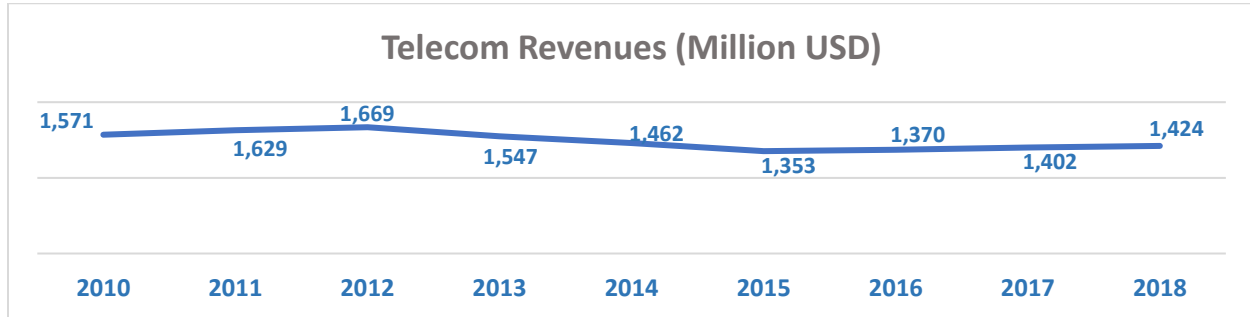
Figure 3: Telecom Revenues 2010 – 2018

4. Internet and Mobile Penetration

Internet and Mobile Penetration 2006-2018

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mobile	78%	83%	91%	101%	108%	120%	140%	142%	147%	145%	100%	97%	
Internet	14%	20%	26%	29%	38%	51%	67%	73%	75%	83%	103%	100%	
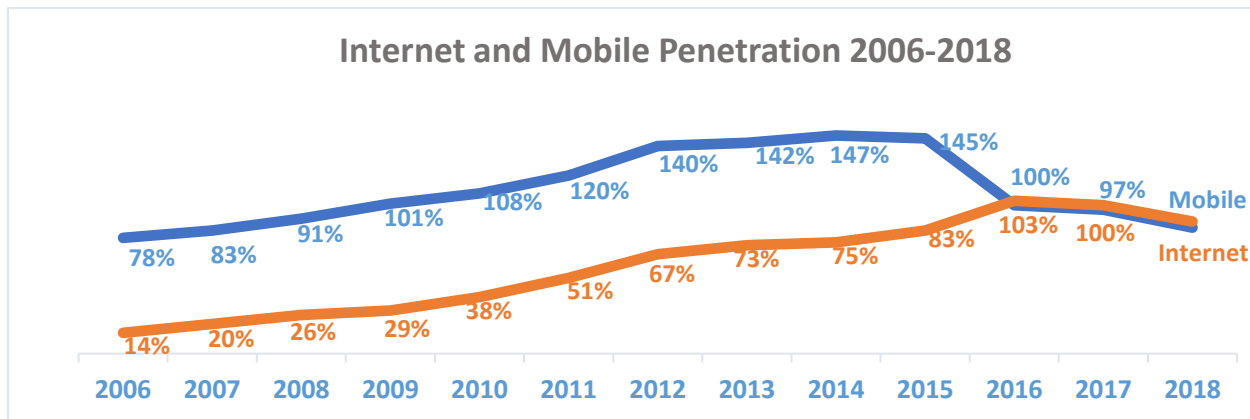
Figure 4: Internet and Mobile Penetration 2006– 2018[2]

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[2] *Note: TRC, and due to inflated stats collected from operators, adopted a different criteria in data collection, analysis and calculation that reflect actual figures. This has caused in the sharp decline in mobile penetration.

5. Employment and Investment in Telecom

Despite the recent dip in investments, the Telecom sector has been employing an annual average of 4,621 people for the past decade. The low investments of 2016 could be associated with the regional instability and disrupted markets. As technological innovation is high on the agenda of the ICT sector increased investment opportunities will contribute to strengthening Jordan as a regional digital hub.

TELECOM EMPLOYMENT 2007-2018

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
5219	5280	5756	5317	4600	4596	4212	4304	4159	4225	4014	4045
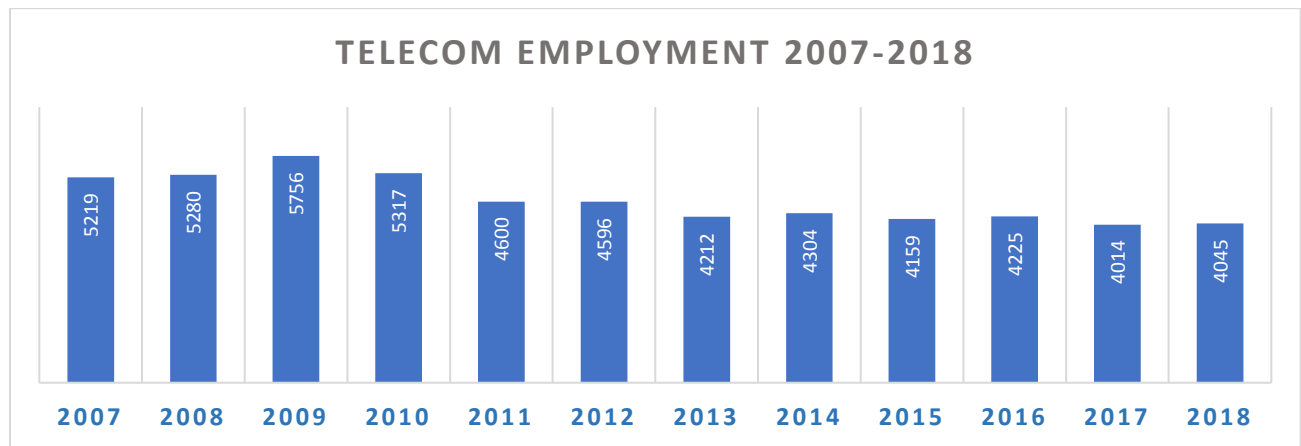
Figure 5: Telecom Employment 2007 – 2018

ANNUAL INVESTMENT (MILLION USD)

2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
163.8	162.4	248.6	162.4	179.4	139.8	218.9	403.9	406.7	134.7	212.0	191.9

Figure 6: Annual Investment in Telecom 2007– 2018

IT and ITES Revenues by Economic Activity
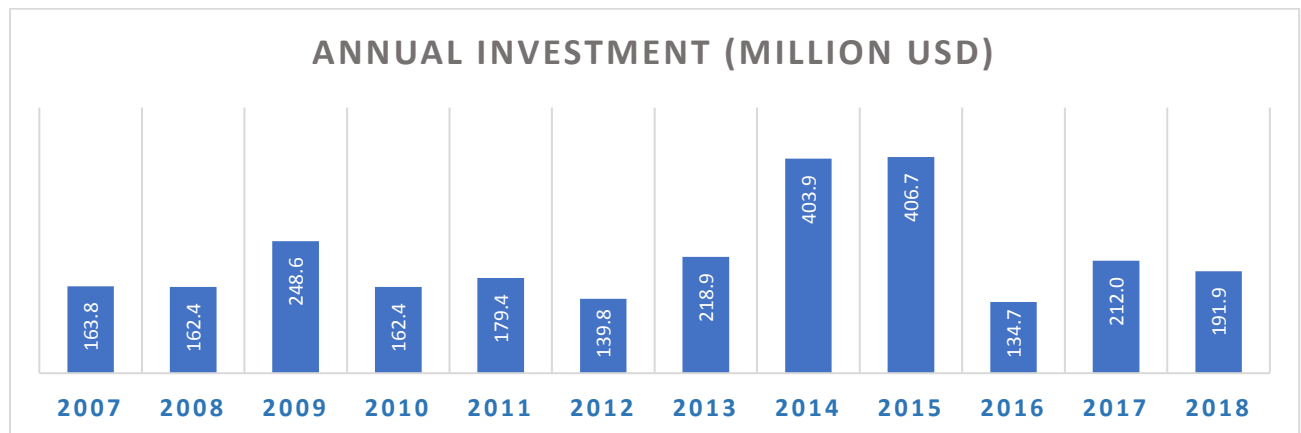
The sector-wise breakup of the industry has been classified through identifying all economic activities (ISIC) of operating companies. The Software Development activity has led the charts with highest revenue in 2018 worth of $182,516,683, followed by Software Licenses Sale, Telecommunications Equipment and Telephones Wholesale and IT Hardware & Infrastructure Installation respectively.
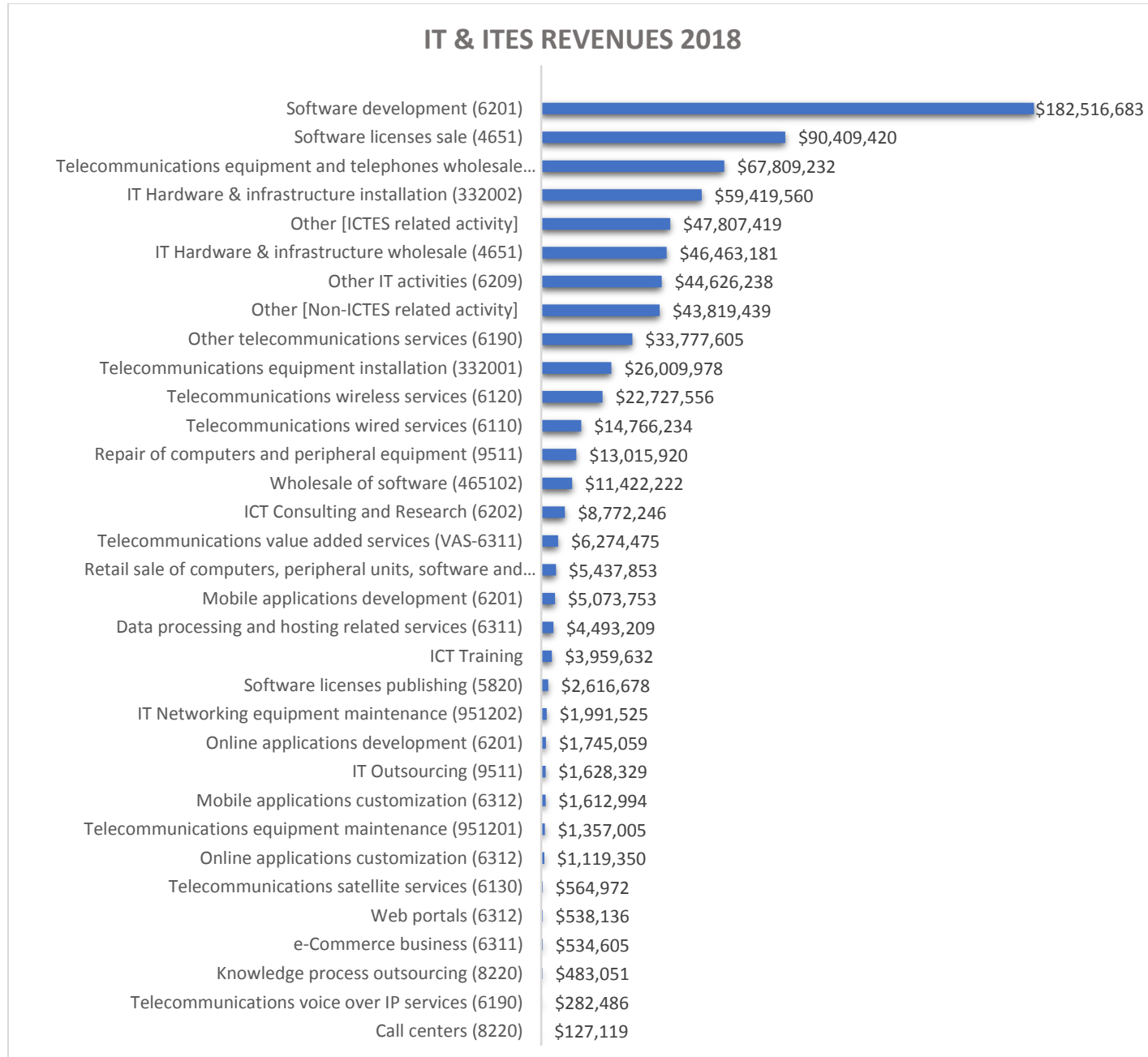
IT & ITES REVENUES 2018

Activity	Revenue
Software development (6201)	$182,516,683
Software licenses sale (4651)	$90,409,420
Telecommunications equipment and telephones wholesale…	$67,809,232
IT Hardware & infrastructure installation (332002)	$59,419,560
Other [ICTES related activity]	$47,807,419
IT Hardware & infrastructure wholesale (4651)	$46,463,181
Other IT activities (6209)	$44,626,238
Other [Non-ICTES related activity]	$43,819,439
Other telecommunications services (6190)	$33,777,605
Telecommunications equipment installation (332001)	$26,009,978
Telecommunications wireless services (6120)	$22,727,556
Telecommunications wired services (6110)	$14,766,234
Repair of computers and peripheral equipment (9511)	$13,015,920
Wholesale of software (465102)	$11,422,222
ICT Consulting and Research (6202)	$8,772,246
Telecommunications value added services (VAS-6311)	$6,274,475
Retail sale of computers, peripheral units, software and…	$5,437,853
Mobile applications development (6201)	$5,073,753
Data processing and hosting related services (6311)	$4,493,209
ICT Training	$3,959,632
Software licenses publishing (5820)	$2,616,678
IT Networking equipment maintenance (951202)	$1,991,525
Online applications development (6201)	$1,745,059
IT Outsourcing (9511)	$1,628,329
Mobile applications customization (6312)	$1,612,994
Telecommunications equipment maintenance (951201)	$1,357,005
Online applications customization (6312)	$1,119,350
Telecommunications satellite services (6130)	$564,972
Web portals (6312)	$538,136
e-Commerce business (6311)	$534,605
Knowledge process outsourcing (8220)	$483,051
Telecommunications voice over IP services (6190)	$282,486
Call centers (8220)	$127,119

Figure 7: IT and ITES Revenues 2018

Domestic Revenue for Various Activities in the Sector

The Size of the domestic market has become significant now in the IT Sector, though it largely remains export driven. As shown in below table, Domestic IT revenue grew to ~$491 million in 2018.
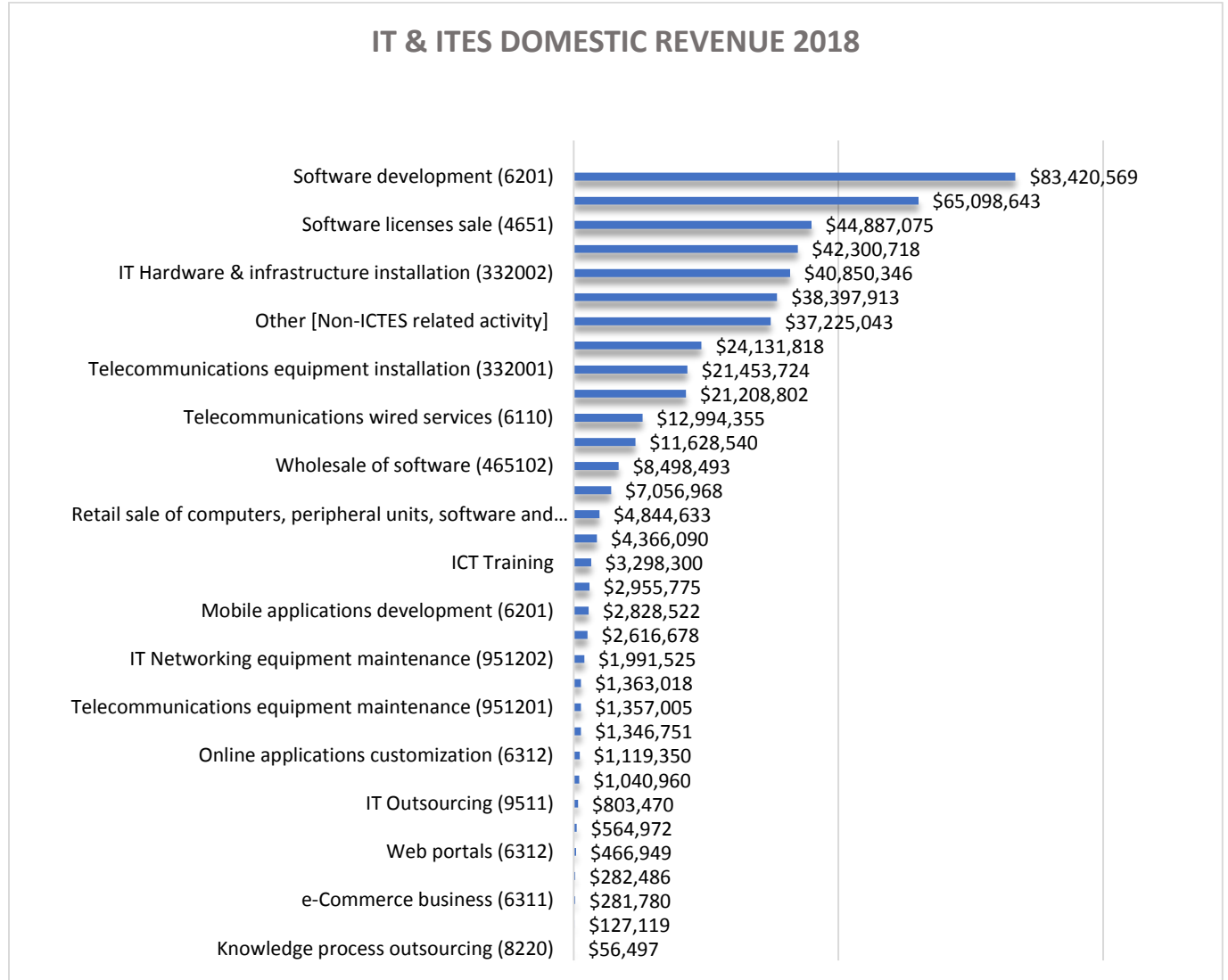
IT & ITES DOMESTIC REVENUE 2018

Activity	Revenue
Software development (6201)	$83,420,569
	$65,098,643
Software licenses sale (4651)	$44,887,075
	$42,300,718
IT Hardware & infrastructure installation (332002)	$40,850,346
	$38,397,913
Other [Non-ICTES related activity]	$37,225,043
	$24,131,818
Telecommunications equipment installation (332001)	$21,453,724
	$21,208,802
Telecommunications wired services (6110)	$12,994,355
	$11,628,540
Wholesale of software (465102)	$8,498,493
	$7,056,968
Retail sale of computers, peripheral units, software and…	$4,844,633
	$4,366,090
ICT Training	$3,298,300
	$2,955,775
Mobile applications development (6201)	$2,828,522
	$2,616,678
IT Networking equipment maintenance (951202)	$1,991,525
	$1,363,018
Telecommunications equipment maintenance (951201)	$1,357,005
	$1,346,751
Online applications customization (6312)	$1,119,350
	$1,040,960
IT Outsourcing (9511)	$803,470
	$564,972
Web portals (6312)	$466,949
	$282,486
e-Commerce business (6311)	$281,780
	$127,119
Knowledge process outsourcing (8220)	$56,497

Figure 8: IT & ITES Domestic Revenue 2018

Export Revenue for Various Activities in the Sector

As per below figure, exports revenue from the sector services have a contribution of around 35% of the total revenue. The exports revenue generated from this segment stands at ~$262 million in 2018. The sector activities' revenues are illustrated in the figure below.

IT & ITES EXPORT REVENUE 2018

Activity	Revenue
Software development (6201)	$99,096,114
Software licenses sale (4651)	$45,522,345
Other telecommunications services (6190)	$32,430,853
Other IT activities (6209)	$20,494,420
IT Hardware & infrastructure installation (332002)	$18,569,214
Other [ICTES related activity]	$9,409,506
Other [Non-ICTES related activity]	$6,594,396
Telecommunications equipment installation (332001)	$4,556,254
IT Hardware & infrastructure wholesale (4651)	$4,162,463
Telecommunications value added services (VAS-6311)	$3,318,700
Wholesale of software (465102)	$2,923,729
Telecommunications equipment and telephones wholesale…	$2,710,590
Mobile applications development (6201)	$2,245,231
Telecommunications wired services (6110)	$1,771,880
ICT Consulting and Research (6202)	$1,715,278
Telecommunications wireless services (6120)	$1,518,754
Repair of computers and peripheral equipment (9511)	$1,387,381
IT Outsourcing (9511)	$824,859
ICT Training	$661,332
Retail sale of computers, peripheral units, software and…	$593,220
Mobile applications customization (6312)	$572,034
Knowledge process outsourcing (8220)	$426,554
Online applications development (6201)	$382,041
e-Commerce business (6311)	$252,825
Data processing and hosting related services (6311)	$127,119
Web portals (6312)	$71,186

Figure 9: IT & ITES Export Revenue 2018

ITES & ICT TRAINING REVENUE

The domestic revenue from ITES stood at $127,119 during the fiscal year 2018. The total revenue contribution from ICT Training is around $4 million, comprises at 83% domestic revenue and 17% export revenue.

ITES REVENUE 2018							
ISIC Activity	Final ISIC	Total Revenue	%	Domestic Revenue	%	Export Revenue	%
Activities of call centers	8220	$127,119	100%	$127,119	100%	$0	100%
Total		$127,119	100%	$127,119	100%	$0	100%

Table 3: ITES Revenue 2018

ICT TRAINING REVENUE 2018							
ISIC Activity	Final ISIC	Total Revenue	%	Domestic Revenue	%	Export Revenue	%
ICT Training	ICT Training	$3,959,632	100%	$3,298,300	100%	$661,332	100%
Total		$3,959,632	100%	$3,298,300	100%	$661,332	100%

Table 1: ICT Training Revenue 2018

IT Value Added Revenue

A simple approach was followed to calculate the IT revenue generated from "value-added" activities. While most of the services under IT were considered "high value-added" activities, activities associated with "significant import input" and "slight domestic processing" were considered "low value-added" activities. Accordingly, the activities identified in table 12 below were excluded from calculating the IT revenue generated from "high value-added" activities.

IT REVENUE – LOW ADDED VALUE ACTIVITIES 2018	
ISIC Activity	ISIC
Telecommunications equipment and telephones wholesale	4652010
Wholesale of software	465102
IT Hardware & infrastructure wholesale	4651

Table 5: IT "Low Value Added" Activities Revenues

The data below shows the contribution of "high value-added" and "low value-added" activities to Total, Domestic, and Export IT Revenues.

	High Value Add	%	Low Value Add	%
Total IT Revenue (USD)	$627,508,530	83.31%	$125,694,635	16.69%
Domestic IT Revenue (USD)	$374,967,034	76.39%	$115,897,853	23.61%
Export IT Revenue (USD)	$252,541,496	96.27%	$252,541,496	3.73%

Table 6: IT Revenue Value-Add Breakdown (done)

According to the figures below, more than (83%) of the total IT sector revenue is generated from "high value-added" activities, 96.27% of exports revenue results from "high value-added" IT activities, demonstrating that the IT industry brings high value to the Jordanian economy mainly in exports.
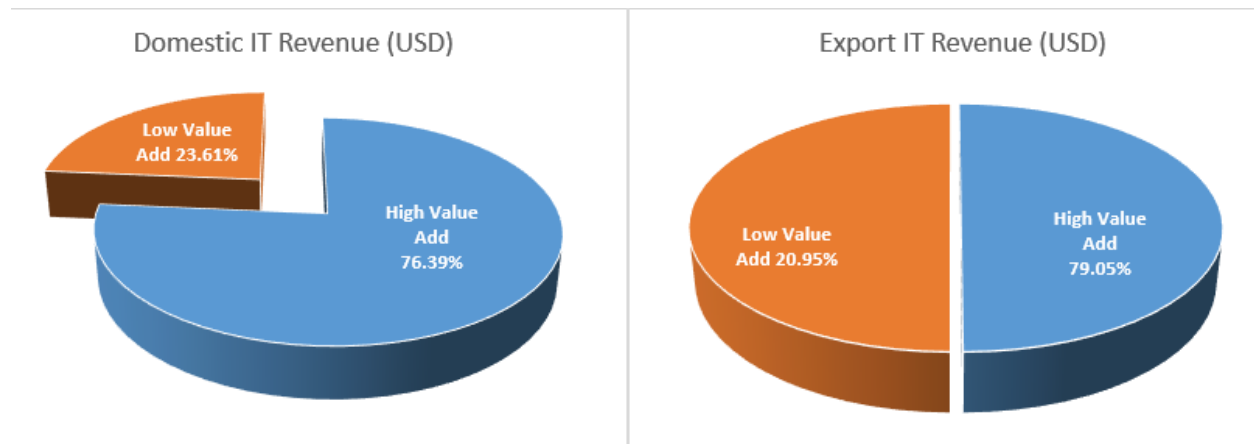
Figure 10: Contribution of Value-Added IT activities to Domestic and Export IT Revenues

IT Imports

Export and Import are the most important macro-economic indicators for a country. These indicators are the integral part of the total developmental effort and national growth of the Jordanian economy. The export growth would increase the import capacity of the country which would boost up industrialization as well as overall economic activities. Jordan is seeking to reduce import dependency on ICT components and promote indigenization. The total IT imports in 2018 is worth $180,259,685.

IT IMPORTS 2018		
Total Imports	Value (USD)	%
Hardware	$83,196,178	46.15%
Software	$22,367,107	12.41%
IT Services	$26,692,662	14.81%
Licenses	$7,685,336	4.26%
Others	$40,318,401	22.37%
Total USD	$180,259,685	100%

Table 7: IT Imports 2018

IT and ITES Exports

Jordan is striving to be a leading export market worldwide. Today about one fourth of total global production is exported. Understanding this transformative process is important because trade has generated gains, but it has also had important distributional consequences. Export volume revenues are reported by country in the below figure with Saudi Arabia leading the markets at $56,530,572 in 2018.
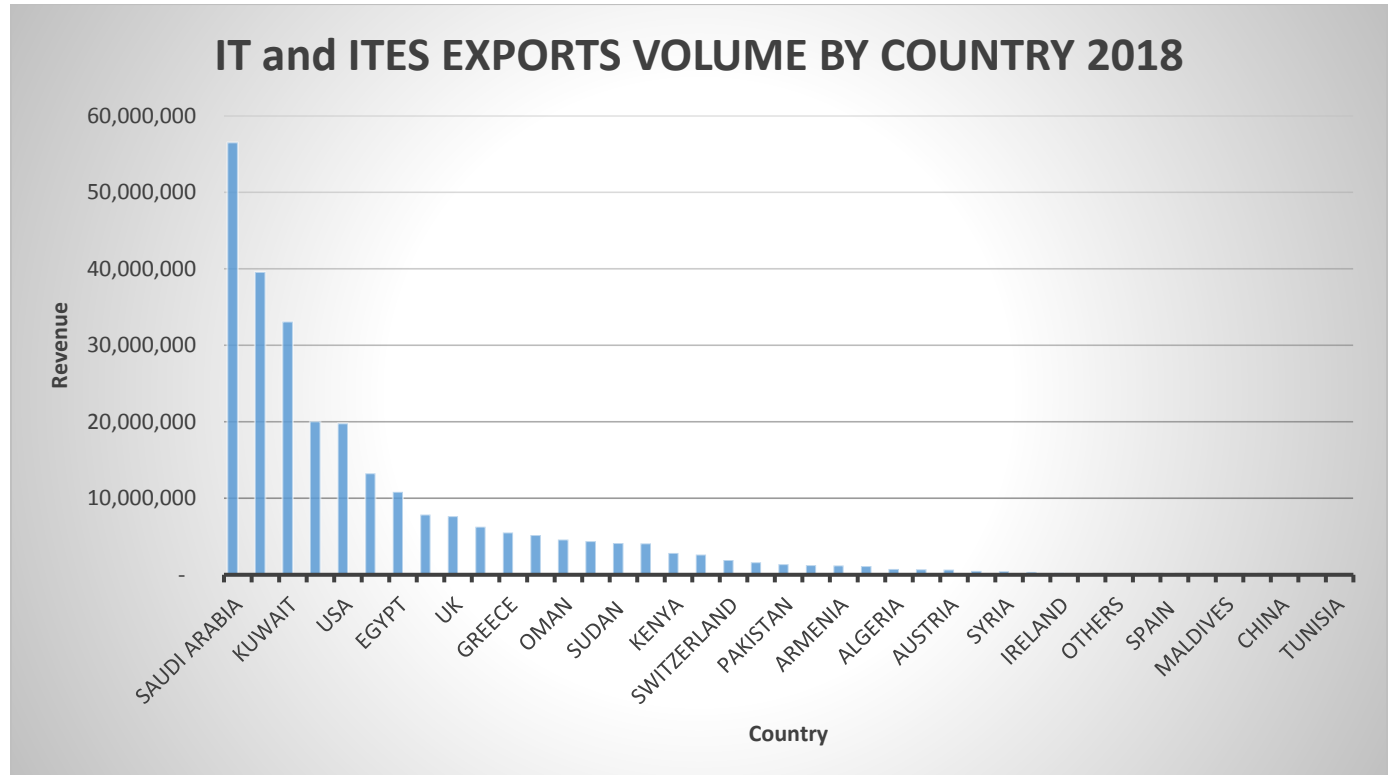
Figure 11: IT and ITES Exports Revenue by Country

IT and ITES Employment

1.   Employment by Function

Employment Functions are the activities divided below for the production of final goods or services intended for the market or for third parties. Usually these functions make up the primary activity of the enterprise, but they may also include other activities if the enterprise considers these as part of its core functions.

The figure below illustrates the employment percentage by function for the IT and ITES sector 2018.
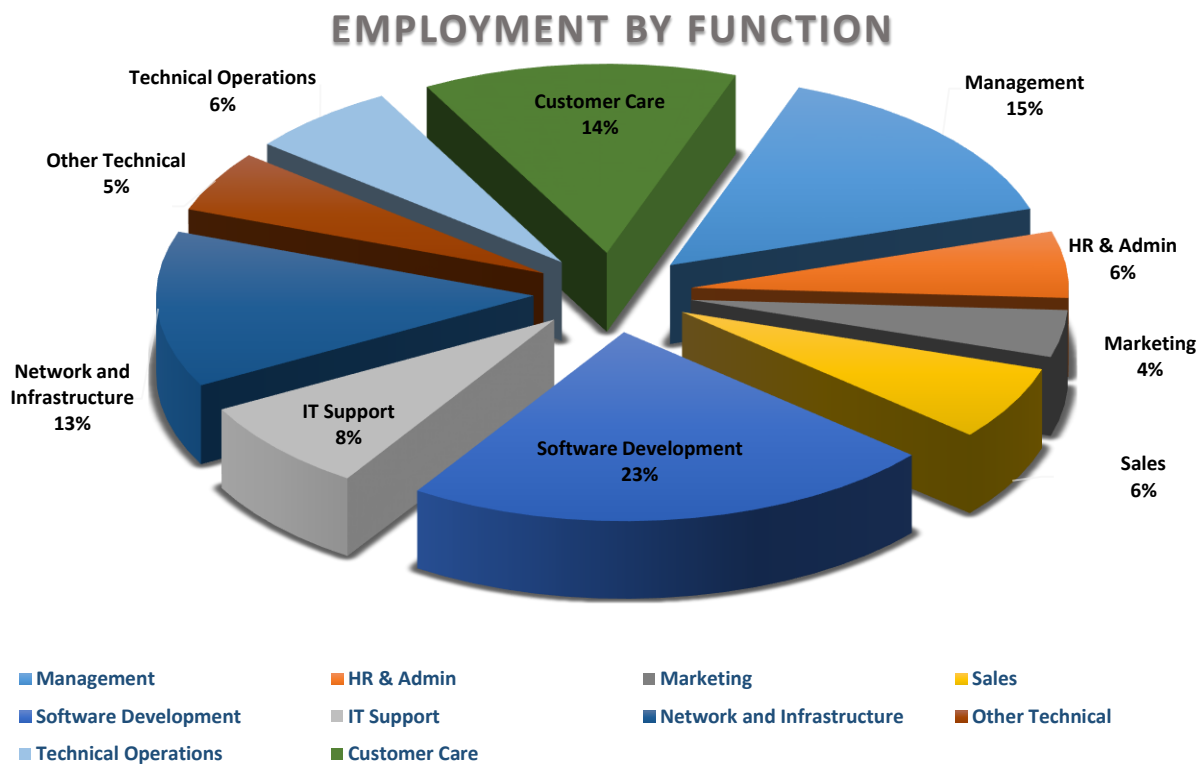
Figure 12: Employment by function

2.   Employment by Nationality

The sector has employed 13,164 Jordanians and 489 foreigners in 2018.
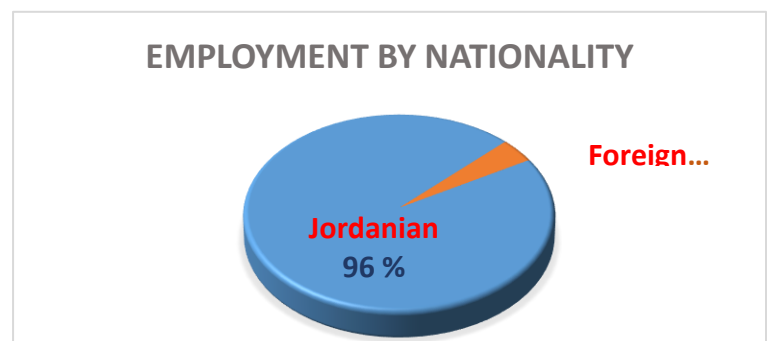
Figure 13: Employment by nationality

3.   Employment by Location

With a total of 13,653 employments, the sector have succeeded with 13,065 employments locally while 588 are employed abroad.

EMPLOYMENT BY LOCATION

Abroad…

Local 96%

Figure 14: Employment by location

4.   Employment by Gender

Of total employments by this sector for 2018, 67% of employees are males and 33% are females.

EMPLOYMENT BY GENDER

Female 33%

Male 67%
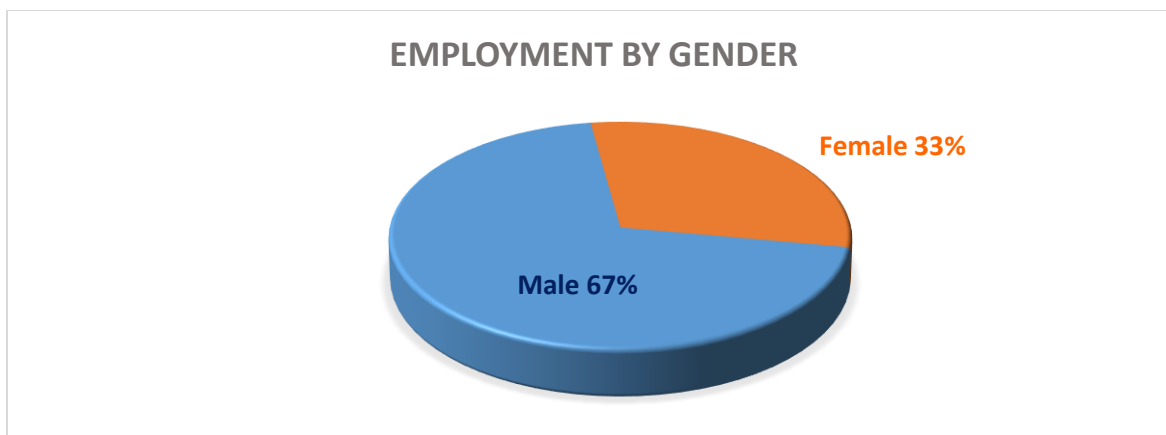
Figure 15: Employment by gender

5.   IT & ITES Employment 2002 – 2018

TOTAL IT & ITES EMPLOYMENT 2002 - 2018

Year	Value
2002	8000
2003	8117
2004	8523
2005	10032
2006	10712
2007	11034
2008	10294
2009	11334
2010	9858
2011	11235
2012	11360
2013	11637
2014	12080
2015	12634
2016	13187
2017	13658
2018	13653

Figure 16: IT & ITES Employment 2002 – 2018

Appendices

Appendix A: Summary of Participants

Survey Participants Summary	
Category	**Total**
Initial Identified Companies	720
Non-ICT/ITES or Not in Jordan Identified Companies	33
Total ICT/ITES Identified Companies	603
Total Targeted Companies to fill the questionnaire	603
Total Companies Completed the questionnaire	131
Total Companies Did Not Fill the questionnaire	472

Appendix B: Participations by Economic Activity

Companies Activities			
ISIC Activity	**Group A**	**Group B**	**Total**
Telecommunications wired services (6110)	5	4	9
Telecommunications wireless services (6120)	6	3	9
Telecommunications satellite services (6130)	1	0	1
Telecommunications equipment and telephones wholesale (4652010)	12	13	25
Telecommunications equipment installation (332001)	7	17	24
Telecommunications equipment maintenance (951201)	5	0	5
Telecommunications voice over IP services (6190)	1	0	1
Telecommunications value added services (VAS-6311)	7	6	13
Other telecommunications services (6190)	5	5	10
Reproduction of recorded media from master copies of software and data on discs and tapes (182001)	0	1	1
Manufacture of electronic components and boards (2610)	0	6	6
Manufacture of computers and peripheral equipment (2620)	0	0	0
Manufacture of data communications equipment such as bridges routers and gateways (263001)	0	0	0
Manufacture of hard drive media (2680)	0	0	0
Manufacture of consumer electronics (2640)	0	0	0
Manufacture of fiber optic cables (2731)	0	0	0
Wholesale of software (465102)	3	0	3
IT Hardware & infrastructure wholesale (4651)	4	35	39

Companies Activities			
ISIC Activity	Group A	Group B	Total
IT Hardware & infrastructure installation (332002)	10	17	27
Repair of computers and peripheral equipment (9511)	4	16	20
IT Networking equipment maintenance (951202)	2	6	8
Software development (6201)	25	160	185
Software licenses sale (4651)	26	31	57
Software licenses publishing (5820)	3	18	21
IT Outsourcing (9511)	5	0	5
ICT Consulting and Research (6202)	3	20	23
Other IT activities (6209)	19	30	49
Data processing and hosting related services (6311)	5	47	52
Online applications development (6201)	10	0	10
Online applications customization (6312)	5	4	9
Mobile applications development (6201)	14	6	20
Mobile applications customization (6312)	6	5	11
Web portals (6312)	5	32	37
e-Commerce business (6311)	6	4	10
Games Development (6201)	0	0	0
Call centers (8220)	2	1	3
Knowledge process outsourcing (8220)	3	2	5
Manufacture of consumer electronics (2640)	0	0	0
Retail sale of computers, peripheral units, software and telecommunications equipment in specialized stores (4741)	4	10	14
ICT Training	10	7	17
Other [ICTES related activity]	8	20	28
Other [Non-ICTES related activity]	9	13	22
Total	240	539	779

Group A: Companies completed the survey & carried out this activity
Group B: Companies did not complete the survey
Note: Number of total activities is higher than total participating companies as companies have more than one activity.

Appendix C: ISIC 4.0 – ICT and ITES Economic Activities

Section	Code	Description
ICT and ITES ISIC Definition		
Section	Code	Description
Section C - Manufacturing:	2610	Manufacture of electronic components and boards
	2620	Manufacture of computers and peripheral equipment
	263001	Manufacture of data communications equipment, such as bridges, routers, and gateways
	268001	Manufacture of hard drive media
	2731	Manufacture of fiber optic cables
	332002	Installation of communications equipment
	332002	Installation of mainframe and similar computers
Section G – Wholesale & retail trade:	4651	Wholesale of computers, computer peripheral equipment and software
	465201	Wholesale of telephone and communications equipment
	5820	Software publishing and deployment
Section J – Information & Communication:	6110	Wired telecommunications activities
	6120	Wireless telecommunications activities
	6130	Satellite telecommunications activities
Section J – Information & Communication:	6190	Other telecommunications activities
	6201	Computer programming activities
	6202	Computer consultancy and computer facilities management activities
	6209	Other information technology and computer service activities
	6311	Data processing, hosting and related activities
	6312	Web portals
	8220	Activities of call centers and business process outsourcing
Section N – Administrative & support service activities:	9511	Repair of computers and peripheral equipment
Section S – Other services activities:	951201	Repair of carrier equipment modems
	951202	Repair of communications transmission equipment (e.g. routers, bridges, modems)
	VAS-6311	Telecom value added services - VAS
	EC-6311	e-Commerce business

Appendix D: IT and ITES Revenues by Economic Activities

ISIC Activity	Total Revenue USD	%	Domestic Revenue USD	%	Export Revenue USD	%
Telecommunications wired services (6110)	$14,766,234	1.96%	$12,994,355	2.65%	$1,771,880	0.68%
Telecommunications wireless services (6120)	$22,727,556	3.02%	$21,208,802	4.32%	$1,518,754	0.58%
Telecommunications satellite services (6130)	$564,972	0.08%	$564,972	0.12%	$0	0.00%
Telecommunications equipment and telephones wholesale (4652010)	$67,809,232	9.00%	$65,098,643	13.26%	$2,710,590	1.03%
Telecommunications equipment installation (332001)	$26,009,978	3.45%	$21,453,724	4.37%	$4,556,254	1.74%
Telecommunications equipment maintenance (951201)	$1,357,005	0.18%	$1,357,005	0.28%	$0	0.00%
Telecommunications voice over IP services (6190)	$282,486	0.04%	$282,486	0.06%	$0	0.00%
Telecommunications value added services (VAS-6311)	$6,274,475	0.83%	$2,955,775	0.60%	$3,318,700	1.27%
Other telecommunications services (6190)	$33,777,605	4.48%	$1,346,751	0.27%	$32,430,853	12.36%
Reproduction of recorded media from master copies of software and data on discs and tapes (182001)	$0	0.00%	$0	0.00%	$0	0.00%
Manufacture of electronic components and boards (2610)	$0	0.00%	$0	0.00%	$0	0.00%
Manufacture of computers and peripheral equipment (2620)	$0	0.00%	$0	0.00%	$0	0.00%
Manufacture of data communications equipment such as bridges routers and gateways (263001)	$0	0.00%	$0	0.00%	$0	0.00%
Manufacture of hard drive media (2680)	$0	0.00%	$0	0.00%	$0	0.00%
Manufacture of consumer electronics (2640)	$0	0.00%	$0	0.00%	$0	0.00%
Manufacture of fiber optic cables (2731)	$0	0.00%	$0	0.00%	$0	0.00%
Wholesale of software (465102)	$11,422,222	1.52%	$8,498,493	1.73%	$2,923,729	1.11%
IT Hardware & infrastructure wholesale (4651)	$46,463,181	6.17%	$42,300,718	8.62%	$4,162,463	1.59%
IT Hardware & infrastructure installation (332002)	$59,419,560	7.89%	$40,850,346	8.32%	$18,569,214	7.08%
Repair of computers and peripheral equipment (9511)	$13,015,920	1.73%	$11,628,540	2.37%	$1,387,381	0.53%
IT Networking equipment maintenance (951202)	$1,991,525	0.26%	$1,991,525	0.41%	$0	0.00%
Software development (6201)	$182,516,683	24.23%	$83,420,569	16.99%	$99,096,114	37.77%
Software licenses sale (4651)	$90,409,420	12.00%	$44,887,075	9.14%	$45,522,345	17.35%
Software licenses publishing (5820)	$2,616,678	0.35%	$2,616,678	0.53%	$0	0.00%
IT Outsourcing (9511)	$1,628,329	0.22%	$803,470	0.16%	$824,859	0.31%
ICT Consulting and Research (6202)	$8,772,246	1.16%	$7,056,968	1.44%	$1,715,278	0.65%
Other IT activities (6209)	$44,626,238	5.92%	$24,131,818	4.92%	$20,494,420	7.81%
Data processing and hosting related services (6311)	$4,493,209	0.60%	$4,366,090	0.89%	$127,119	0.05%

ISIC Activity	Total Revenue USD	%	Domestic Revenue USD	%	Export Revenue USD	%
Online applications development (6201)	$1,745,059	0.23%	$1,363,018	0.28%	$382,041	0.15%
Online applications customization (6312)	$1,119,350	0.15%	$1,119,350	0.23%	$0	0.00%
Mobile applications development (6201)	$5,073,753	0.67%	$2,828,522	0.58%	$2,245,231	0.86%
Mobile applications customization (6312)	$1,612,994	0.21%	$1,040,960	0.21%	$572,034	0.22%
Web portals (6312)	$538,136	0.07%	$466,949	0.10%	$71,186	0.03%
e-Commerce business (6311)	$534,605	0.07%	$281,780	0.06%	$252,825	0.10%
Games Development (6201)	$0	0.00%	$0	0.00%	$0	0.00%
Call centers (8220)	$127,119	0.02%	$127,119	0.03%	$0	0.00%
Knowledge process outsourcing (8220)	$483,051	0.06%	$56,497	0.01%	$426,554	0.16%
Manufacture of consumer electronics (2640)	$0	0.00%	$0	0.00%	$0	0.00%
Retail sale of computers, peripheral units, software and telecommunications equipment in specialized stores (4741)	$5,437,853	0.72%	$4,844,633	0.99%	$593,220	0.23%
ICT Training	$3,959,632	0.53%	$3,298,300	0.67%	$661,332	0.25%
Other [ICTES related activity]	$47,807,419	6.35%	$38,397,913	7.82%	$9,409,506	3.59%
Other [Non-ICTES related activity]	$43,819,439	5.82%	$37,225,043	7.58%	$6,594,396	2.51%
Total	$753,203,165	100%	$490,864,887	100%	$262,338,277	100%

Appendix E: IT & ITES Exports Volumes by Country

IT & ITES EXPORTS VOLUMES BY COUNTRY - 2018		
Sale Region	Total Export Revenue Prorated in USD	%
Saudi Arabia	56,530,572	21.55%
UAE	39,581,441	15.09%
Kuwait	33,119,525	12.62%
Netherlands	20,036,286	7.64%
USA	19,822,979	7.56%
Iraq	13,268,001	5.06%
Egypt	10,839,912	4.13%
Qatar	7,887,165	3.01%
UK	7,685,742	2.93%
Palestine	6,305,316	2.40%
Greece	5,514,311	2.10%
Bahrain	5,185,442	1.98%
Oman	4,627,914	1.76%
Nigeria	4,383,422	1.67%
Sudan	4,139,325	1.58%
Poland	4,123,048	1.57%
Kenya	2,867,306	1.09%
Lebanon	2,658,690	1.01%
Switzerland	1,934,720	0.74%
Croatia	1,638,200	0.62%
Pakistan	1,376,307	0.52%

IT & ITES EXPORTS VOLUMES BY COUNTRY - 2018		
Sale Region	Total Export Revenue Prorated in USD	%
Germany	1,275,043	0.49%
Armenia	1,211,522	0.46%
South Africa	1,149,932	0.44%
Algeria	779,907	0.30%
Malaysia	734,030	0.28%
Austria	672,216	0.26%
Yemen	520,056	0.20%
Syria	458,769	0.17%
Lybia	375,672	0.14%
Ireland	259,847	0.10%
Karabakh	233,862	0.09%
Others	227,820	0.09%
Japan	183,508	0.07%
Spain	175,874	0.07%
Africa	137,631	0.05%
Maldives	130,290	0.05%
Romania	116,931	0.04%
China	91,754	0.03%
Italy	55,052	0.02%
Tunisia	22,938	0.01%
Total	262,338,277	100%

Appendix F: Employment in the IT & ITES Sector

Category	Jordanian/Foreign	Local/Abroad	Male/Female	Total	%
Management	Jordanian Employees	Local	Male	1347	10%
	Jordanian Employees	Local	Female	553	4%
	Foreign Employees	Local	Male	19	0%
	Foreign Employees	Local	Female	4	0%
	Jordanian Employees	Abroad	Male	41	0%
	Jordanian Employees	Abroad	Female	2	0%
	Foreign Employees	Abroad	Male	30	0%
	Foreign Employees	Abroad	Female	0	0%
HR & Admin	Jordanian Employees	Local	Male	284	2%
	Jordanian Employees	Local	Female	443	3%
	Foreign Employees	Local	Male	11	0%
	Foreign Employees	Local	Female	2	0%
	Jordanian Employees	Abroad	Male	6	0%
	Jordanian Employees	Abroad	Female	2	0%

	Foreign Employees	Abroad	Male	17	0%
	Foreign Employees	Abroad	Female	9	0%
Marketing	Jordanian Employees	Local	Male	340	2%
	Jordanian Employees	Local	Female	198	1%
	Foreign Employees	Local	Male	4	0%
	Foreign Employees	Local	Female	2	0%
	Jordanian Employees	Abroad	Male	4	0%
	Jordanian Employees	Abroad	Female	0	0%
	Foreign Employees	Abroad	Male	0	0%
	Foreign Employees	Abroad	Female	0	0%
Sales	Jordanian Employees	Local	Male	491	4%
	Jordanian Employees	Local	Female	239	2%
	Foreign Employees	Local	Male	11	0%
	Foreign Employees	Local	Female	0	0%
	Jordanian Employees	Abroad	Male	58	0%
	Jordanian Employees	Abroad	Female	0	0%
	Foreign Employees	Abroad	Male	43	0%
	Foreign Employees	Abroad	Female	24	0%
Software Development	Jordanian Employees	Local	Male	2006	15%
	Jordanian Employees	Local	Female	966	7%
	Foreign Employees	Local	Male	43	0%
	Foreign Employees	Local	Female	6	0%
	Jordanian Employees	Abroad	Male	45	0%
	Jordanian Employees	Abroad	Female	6	0%
	Foreign Employees	Abroad	Male	41	0%
	Foreign Employees	Abroad	Female	26	0%
IT Support	Jordanian Employees	Local	Male	771	6%
	Jordanian Employees	Local	Female	232	2%
	Foreign Employees	Local	Male	11	0%
	Foreign Employees	Local	Female	0	0%
	Jordanian Employees	Abroad	Male	17	0%
	Jordanian Employees	Abroad	Female	6	0%
	Foreign Employees	Abroad	Male	37	0%
	Foreign Employees	Abroad	Female	9	0%
Network and Infrastructure	Jordanian Employees	Local	Male	1218	9%
	Jordanian Employees	Local	Female	549	4%
	Foreign Employees	Local	Male	6	0%
	Foreign Employees	Local	Female	6	0%
	Jordanian Employees	Abroad	Male	32	0%

	Jordanian Employees	Abroad	Female	0	0%
	Foreign Employees	Abroad	Male	9	0%
	Foreign Employees	Abroad	Female	0	0%
Other Technical	Jordanian Employees	Local	Male	519	4%
	Jordanian Employees	Local	Female	127	1%
	Foreign Employees	Local	Male	13	0%
	Foreign Employees	Local	Female	2	0%
	Jordanian Employees	Abroad	Male	6	0%
	Jordanian Employees	Abroad	Female	6	0%
	Foreign Employees	Abroad	Male	41	0%
	Foreign Employees	Abroad	Female	0	0%
Technical Operations	Jordanian Employees	Local	Male	596	4%
	Jordanian Employees	Local	Female	232	2%
	Foreign Employees	Local	Male	9	0%
	Foreign Employees	Local	Female	2	0%
	Jordanian Employees	Abroad	Male	2	0%
	Jordanian Employees	Abroad	Female	0	0%
	Foreign Employees	Abroad	Male	19	0%
	Foreign Employees	Abroad	Female	6	0%
Customer Care	Jordanian Employees	Local	Male	943	7%
	Jordanian Employees	Local	Female	852	6%
	Foreign Employees	Local	Male	2	0%
	Foreign Employees	Local	Female	2	0%
	Jordanian Employees	Abroad	Male	17	0%
	Jordanian Employees	Abroad	Female	2	0%
	Foreign Employees	Abroad	Male	11	0%
	Foreign Employees	Abroad	Female	11	0%
Total				**13653**	**100%**

Appendix G: IT & ITES Employment by category

IT and ITES Employment by Category			
Category		**Total**	**%**
Employment by Function	Management	1,997	15%
	HR & Admin	775	6%
	Marketing	549	4%
	Sales	865	6%
	Software Development	3,140	23%
	IT Support	1,083	8%
	Network and Infrastructure	1,821	13%
	Other Technical	715	5%
	Technical Operations	867	6%
	Customer Care	1,840	13%
Employment by Nationality	Jordanian Employees	13,164	96%
	Foreign Employees	489	4%
Employment by Location	Local	13,065	96%
	Abroad	588	4%
Employment by Gender	Male	9,122	67%
	Female	4,531	33%

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