Factsheet

Obstacles and Challenges that face the Hardware sector in Gaza Strip
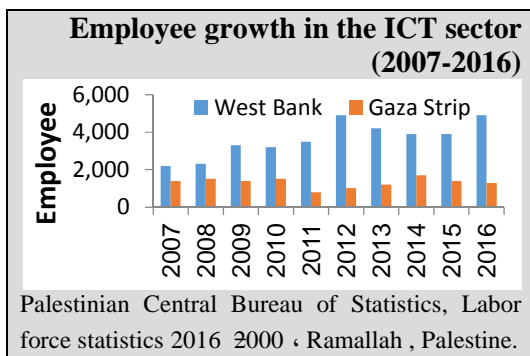
September 2017

- The Information and Communication Technologies sector (ICT) is considered an independent economic sector that both supports and assists other business and production sectors.

- The ICT sector is comprised of 5 sub-sectors: Hardware, Software, Training and Consultancy, Telecom and Internet Service Providers. With 32% of the total number of institutes in Palestine working in this field, the hardware sector is regarded as the vital organ that pumps life into the other sub-sectors[1].

- The obstacles that face the Hardware sub-sector are one of the most significant and major obstacles that encounter the ICT sector in Gaza. Hence this fact sheet will elucidate on such obstacles, their impact and will conclude with recommendations to mitigate and overcome them.

- Obstacles to the hardware subsector are mainly due to the restrictions imposed by the Israeli authorities concerning the right to operate freely in the field. In addition, the occupation monopolizes the Palestinian radio frequency spectrum, bans the Palestinian operators from working freely and disrupts the frequency spectrum especially in the FM domain.

- It's noteworthy to mention that during the tunnel-trade period with Egypt (2010-2013) all sorts of Hardware equipment and supplies entered the Gaza market through the tunnels and essentially covered the needs of the local market which resulted in a distinctive activity in the ICT sector. However, the equipment and supplies all lacked supervision concerning quality, conformity of standards and prices.

ICT Sector main indicators in Gaza:

Employee growth in the ICT sector (2007-2016)

Palestinian Central Bureau of Statistics, Labor force statistics 2016 2000 ، Ramallah , Palestine.

Gaza's ICT sector contribution to the economic growth and to the added value is diminutive. It amounts to 0.5% of the total GDP compared to the west bank's 7.1% in 2016[2].

The number of employees in the Gaza ICT sector amounted to 1300 in contrast with the west bank's 4900 in 2016.

One job opportunity in the field of ICT results in 2-3 other job opportunities in sectors and fields connected with ICT. Henceforth, this sector is vital in terms of creating job opportunities[3].

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[1]Ministry of Communications and Information Technology (2015), Summary and Figures on the Palestinian Information Society 2014, Ramallah, Palestine.
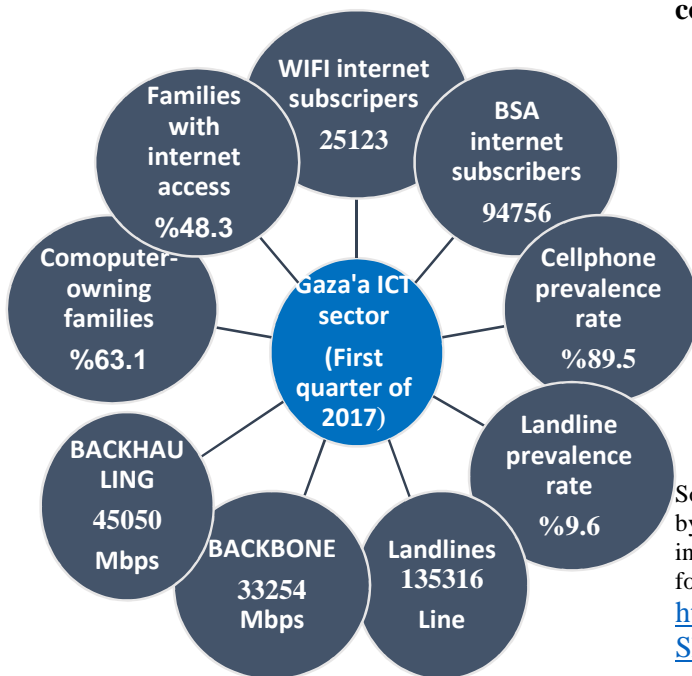
[2] Palestinian Central Bureau of Statistics (2017), Press Report of Preliminary Estimates of Quarterly National Accounts (1st Quarter 2017), Ramallah, Palestine

[3] Palestinian Market Development Program (2014), MNEs outsourcing to Palestinians: Market System Analysis.

Hardware businesses in Gaza

The average number of employees ranges from 5-25
The average capital totals to $2-3 million
The annual turnover of a company totals to $1-3 million.
Source: The above mentioned numbers were based on the data of 5 companies within Gaza

Gaza's ICT sector- June 2016

WIFI internet subscripers 25123
Families with internet access %48.3
BSA internet subscribers 94756
Comoputer-owning families %63.1
Gaza'a ICT sector (First quarter of 2017)
Cellphone prevalence rate %89.5
BACKHAULING 45050 Mbps
BACKBONE 33254 Mbps
Landlines 135316 Line
Landline prevalence rate %9.6

source: Ministry of telecommunication and internet information
technology- Gaza

The ICT sector in Gaza has witnessed growth in the first half of the year 2017 compared to 2016:

- The rate of BSA internet subscribers has jumped to 1.06% and that constitutes about 70% of the number of landlines. .
- The rate of WIFI internet subscribers has jumped to 39.78%
- The landline prevalence rate has jumped from 7.08% in 2016 to 9.6% in 2017.
- The cell phone prevalence rate has jumped from 71% in 2016 to 89.9% in 2017.

Source: The figures used were based on the report by the ministry of telecommunication and internet information's website (Accomplishment indicators for 2016)
http://www.mtit.gov.ps/index.php/c_home/ShowDownload/5

Gaza's hardware imports:

Gaza's imports of hardware the occupation allows in are mainly of the basic traditional type as shown in following table:

Value per Piece

Till August 2017	2016	Hardware	Till August 2017	2016	Hardware
2310	3916	Battery charger greater than 6-10 mpa	37107	53666	Mouse and Joysticks
3244	3364	Hard disks	8698	42143	pen drives - portable usb flash drives memory devices
709	3248	Computer monitors	58223	30235	Microphones, speakers and headphones
500	2608	Computers	22825	26155	Routers
390	988	RAMs	22065	22019	Telephones, cellphones, tablets and

					fax mails
362	340	network cards	10008	16231	Reception and broadcasting equipment " receivers, satellite dishes and their parts."
101	221	network switch 1&2	14207	14695	UPS
141	177	CPU	12471	13524	Laptops
68	61	Scanners	33768	13456	Keyboards
29	13	Server	4053	11679	Cameras(web, video, digital)
3	10	CD- ROMS	10901	10742	Power supply units PSU
25	3	Generators	5730	4788	Mp3 players and mp4 players

Source: Ministry of national economy- Gaza.

Hardware terms and Policies in Gaza:

1. Government

The hardware sector is influenced mainly by the procedures and conditions imposed on it by three ministries: Ministry of Telecommunication and Internet Information Technology, Ministry of Finance and Ministry of Economy.

Ministry of Telecommunication and Internet Information's

- These are mostly technical conditions that require getting the ministry's approval for importing certain types of telecommunication devices (terminal and radio communication equipment) in order to make sure that the aforementioned devices match the conformity and technical standards and don't harm the safety of users and network operators and to ensure that electromagnetic interferences are limited to a reasonable minimum level. Also, to make sure that spectrum is used according to the approved spectrum plan.
- **The ministry charges fees for the specific approval for the telecommunication devices according to the following table:**

Type of procedure	Fee(JOD)	
A first-time request	80 JD	1
Renewing or editing the request	30 JD	2
Sample-testing the device	20 JD	3
Issuing a quality-level certificate	100 JD	4
Request to inform about the entry of the equipment	10 JD	5

Source: Ministry of telecommunication and internet information

Provided that the duration of the specific Approval is three years from the time of the issue.

Ministry of Economics

- Requires getting permission for importing.
- The ministry imposes fees and taxes under the pretext of import-permission fees on the hardware equipment (or as known as the tax levy between the traders and companies) as shown in the following table:

Type of device or equipment	Value of piece in NIS
40ft computer-parts container	4000 NIS
20ft microwave container	2500 NIS
Servers	Price varies from 50-200 shekel based

	on the server's level (1,2,3)
Network router	**150 50 NIS based on level (1,2)**
Desktop computer minus monitor	**30 NIS**
Laptop	**20-50 NIS depending on the processor**
Network switch	**20-50 NIS depending on level(1,2)**
Video camera	**10-50 NIS based on the camera's type (zoom,**
Computer monitor ‹CPU ‹tablet ‹ network switch 2 ‹ ‹external hard disk ‹ scanners	**10-20 NIS**
USP	**5-20 NIS depending on the wattage(1 KG or more)**
network cards ‹mp3 players ‹web camera ‹ mouse ‹keyboard ‹router ‹RAM ‹hard disk ‹flash drives ‹router switch	**1-5 NIS**

Source: Ministry of Finance, General Administration of Customs and Excise - Gaza .

Ministry of Finance Policies and Procedures

- Customs and Excise on the importation of hardware equipment, according to the source of purchase as shown in following figures:

Purchasing from Israel	Purchasing from a foriegn supplier:	Purchasing from the west bank:
• Requirs a clearing bill • **Goods of an israeli origin:**2.5% of the invoice is charged (previously 3.5%. • **Goods of a foreign origin:**2.5% of the value of the invoice is charged in addition to a tax levy	• Requirs a custom declaration • A tax levy is imposed on every piece of equipment.	• Requirs an invoice • **Goods of a local origin:** No taxes imposed • **Goods of a forien origin:**Half of the tax levy is imposed on each device in case of purchase from abroad

•Tax •20 ft container 2500 NIS **Microwave**	•Tax •3-15 NIS for each **Telecom munication devices**	•Tax •15 NIS for each device **Laptops**	•Tax •40ft container 4000 NIS **Computer parts**	•Tax •10 NIS for each device **Servers**	•Tax •3 NIS for each device **Routers and switches**

The tax levies imposed by the Ministry on the hardware equipment

Source: Ministry of finance- Gaza.

2. Occupation

* Hardware equipment that are prevented from entering Gaza (a.k.a: the list of the dual use equipment):

The occupation prevents the entry of many hardware devices based on the so-called dual use list (goods and equipment that require a special permission to be transferred to the Palestinian authority territories). This list was issued in 2008 based on an order by the Israeli government under the pretext of Defense Export Supervision and there are two lists for the banned so called "dual list" equipment: the first is applied to all the Palestinian territories while the second is applied to Gaza only. The first list contains: communication supplies, communication support supplies and any equipment that does a communicative function, supplies that disrupt networks and network infrastructure equipment. The Palestinian authority, under this ban, is prohibited from acquiring and providing modern technologies and services especially third and fourth mobile communication generations.

According to the abovementioned ban Israel prohibits the following equipment from entering Gaza:

Equipment and supplies prevented from entering due to security reasons

1. Internet communication cables and equipment	2. Third generation equipment
3. Devices with wireless connection	4. Fourth generation LTE equipment
5. Plater printers	6. Radio and television broadcasting equipment
7. Communication and control devices	8. Fiber optic cables
9. Telephone switchboards (digital, analog)	10. Copper cables for telecommunications
11. Spare parts e.g IC	12. Generators with high capacity
13. Routers, servers and switches and the such	

❖ Obstacles Facing Hardware Sector in Gaza

❖ **Obstacles the occupation on the entering of goods and their impact on the ICT sector:**

- Preventing the third generation equipment from entering hinders the spread of mobile broadband services which consequently ruins the possibility of many job opportunities in this field.

- The long duration that takes goods to enter exposes traders and companies to sever losses due to the fact that the hardware sector is fast-changing in terms of price, model, quality and type.

- Cargo can be returned for the most trifle reasons thus delaying its entry into Gaza and costing additional transportation and storage costs. The cost of transportation per truck is estimated at 4000NIS regardless whether it has been fully utilized or not while the cost of transporting the one Pallet[4] is from 600-700 NIS.

- In case the shipment is returned, the importer bears the expanses of returning the goods. In addition to any possible thefts or loss of equipment during the returning process as transportation companies don't bear

responsibility for that.

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[4] Wooden blanks that carry cargo and mustn't exceed a total height of 1.2 meters for security reasons.

- A subjective manner in processing import and transport procedures in which Israeli border authorities refuse the entry of certain equipment, despite having previously allowed the entry of identical devices before with no restrictions, such refusals will lead the importer to keep the equipment in storage, re-export or sell outside of Israel, or sell in the West Bank or inside Israel itself .

- Confiscation of shipments upon arriving at the Kerem Shalom cross point despite obtaining all the necessary permits without giving any reasons or objections. This indicates subjectivity and lack of clarity in the procedures.

- Inability to meet local demand due to delays in entry of the hardware equipment (estimated to be 30% less than current demand)

- Some companies that can introduce some equipment with relatively advanced qualifications end up monopolizing the market which causes a lack of competitiveness and fairness in the hardware market.

> Optimistically speaking, when hardware equipment entre Gaza what's expected to happen is as follows[5]:
> - ICT companies experience a growth in activity at least twice the level of the current status quo.
> - A reduction in prices for the masses by about 30%-40% .

In light of the previous obstacles, the profitability of hardware companies is negatively affected by more than 60% of its current state which corresponds with high prices of in the local market and especially those that are related or are dependable on equipment that are banned from entry.

- **Local obstacles The absence of supervision and control of goods:**
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The hardware sector in Gaza suffers from a lack of goods and market supervision\ . For example, there is no coordination between the hardware companies and the relevant ministries like Ministry of Telecommunication and Information Technology together with the Ministry of National Economy when it comes to price control, which, in effect, leads to instability in prices especially due to being delayed or prevented from entry. There is also no supervision and control when it comes to the quality, safety and specifications of equipment that are sold and marketed in the local market.

- **Power outages:**

Gaza struggles with a severe power supply crisis where power outage exceed 12 continuous hours . This can reflect negatively on companies operating within the hardware sector as follows:

- The additional costs of the fuel used for the operation of private generators are NIS 2000 per month on average for an average sized company.
- Constant damage to equipment due to frequent power outages which creates additional maintenance costs estimated between 15% and 30% of the value of the equipment.[6]
- Additional costs of setting up solar power units, with a battery depreciation rate of about NIS 1,500 per month (if 16 batteries are used).

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[5] A questionnaire survey for the hardware businesses.
[6] Focus group for Hardware companies held in PITA for the purpose of developing this factsheet on 20/9/2017

- Demand for some hardware devices, such as the desktop computer, declined by more than 70%, and demand for laptops declined by at least 30%.

- Maintenance obstacles:

- The inability to return the equipment covered by a guarantee to the hardware supplier due to security restrictions imposed by the occupation which can lead the hardware companies to sell without a guarantee policy, thus reducing the rights of the Palestinian consumer and causing great losses.
- The national economy's loss due to non-utilization of guarantees on hardware and equipment is estimated at about 30% of the equipment entering the Gaza Strip annually.
- The lack of spare parts in the local market often causes a sever increase in the price due to their scarcity. It also can lead to nonfunctioning or total replacement by new devices: for example, some devices need IC parts to get repaired, but usually become obsolete or get exchanged due to their unavailability).
- The existence of only a limited number of training centers specialized in the training of maintenance of ICT hardware, hence most of the current the maintenance of hardware is done by poorly trained technicians on trial and error bases.
- Lack of human cadres trained in the maintenance of modern equipment due to their inability to travel abroad and receive trainings to keep up with developments due to the continued closure of cross points and the Rafah crossing in particular.
- Lack of equipment used in the process of diagnosis and detection of defects.
- Lack of tools used in the setting up of advanced devices and equipment, especially in the field of wireless communications, partly due to the lack of access to these tools, and the lack of awareness among the technical staff of the importance of such tools (such as GPS) high powered binoculars for long distance viewing[7], spectrum analysis apparatus).

- The considerable number of taxes imposed on equipment:

There's a considerable number of governmental administrations that collects taxes and fees on the entry of hardware and equipment, which consequently causes many issues for companies, such as high prices, and the complexity of the clearance procedures at the cross points.

A case study of a major hardware company in Gaza and the obstacles it faces

❖ The company was established in 2008 as a private shareholding company with a capital of US $180,000 and 9 employees.The company engage in the trade of various kinds of hardware equipment (Telecom, CCTV, Networking, and all other system integrations "Low Current" and the sales for the company are estimated at about$ 1.2 million and

❖ The company provides maintenance service for equipment, where 3 employees had training courses and have scientific qualifications in this area, including diploma and a bachelor in the field of ICT. The company cannot send them to train abroad because of the constant closure of the crossings.

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[7]This is used for the installation of microwave towers (line of sight connection)

- ❖ The company's sources are partially concentrated in imports from abroad by about 60% of the total purchases of the company, in addition to imports from Israel by about 20%, and purchases from companies in the West Bank by about 20%.
- ❖ **In case of making purchases from Israel or the West Bank, the Company shall:**
1. Obtain permission from the Israeli Ministry of Communications (Permit-I).
2. Obtain a security clearance for dual use goods KAMAT.
3. Submit a request from the supplying company including the details of the goods by number, specifications, catalog and the quantity to be imported with the destination and the method of setting up the goods (the permit sometimes takes more than 6 months without getting a reply and it may be rejected).
4. Once the permit from the supplier company is issued, a letter of acceptance is sent to the company in the Gaza Strip in order for it to be registered with the Ministry of Economy in Gaza to book a slot at the Kerem Shalom crossing (two weeks).
5. The products will be sent by the supplier to the Kerem Shalom Crossing on a specific day, "usually a Monday."
6. The goods will be passed into the Palestinian side of the Kerem Shalom Crossing for the of customs and excise taxes to be paid for the Ministries of Finance and Economy in Gaza. In case of failure to reach a settlement, the goods will be held at the crossing.
7. The crossing is either equipped or suitable for inspecting hardware devices (just a public hall exposed to dust and weather conditions). Some of the equipment is damaged during the examination process, or stolen and misplaced during the process of entry. This can cause losses to the company by about 3% -5% of the value of the equipment. In addition , companies are treated with inequality (subject to subjective measures) and unfairness during the process of clearance.
8. In case there's a lot of pressure in the crossing and there's an inability to clear all shipments, the company may be forced leave the truck overnight to be cleared on the following day.

In case of purchasing and importing from abroad, the previous procedures are all followed in addition to the import permit and the standard customs clearance

- ❖ The estimated time of arrival for the goods in case of purchasing from Israel or the West Bank varies from one month to two months, while in case of importing from abroad; it takes about six months and more, causing losses and more costs to burden the company. Those losses are estimated at about 50 % of the value of these devices due to the rapid development of devices and types and the fluctuation in prices.
- ❖ The company will bear transportation costs at about 10% of the total value of purchases when making purchases from Israel or the West Bank, and 20% when importing from abroad.

- ❖ The company faces major maintenance problems due to lack of spare parts. It also cannot return the damaged equipment covered by the guarantee because the occupation prevents the exit of these devices. The percentage of equipment exposed to damage during the period of validity of the guarantee is estimated at 10% of the value of equipment purchased by the company annually.
- ❖ Like other companies, the company has a 50% decline in sales compared to its sales in years of stability.
- ❖ The company's performance is expected to improve no less than 40% in case the abovementioned restrictions that face the hardware equipment are annulled.
- ❖ The company bears additional costs due to power outages which are estimated by $200 a month.

The necessary proceedings to improve the situation of the hardware sector:

o The procedures required from the Palestinian authority:

1. Pressure Israel via various international bodies and institutions, including the International Telecommunication Union, to allow for a normal trade in hardware, or at least to reduce the level of restrictions and the number and quality of devices and equipment that are not allowed to enter. That can be achieved through making use of international conferences and conferences in the field of ICT to expose the occupation's procedures and to increase the pace of media pressure.

2. **Place Pressure upon the Israeli authorities via the General Authority for Civil Affairs and the coordination committees with the occupation, for:**

❖ Coordinate in order to set a specified, predetermined and non changing duration (time frame) to get the approval and the issuance of permits for the equipment to enter and dispose with subjectivity in dealings with the hardware companies.

❖ Obtain approval for "an item" once a year instead of what is currently implemented (obtaining special approval for each bill per shipment).

❖ Alleviate inspection procedures as it's not necessary to inspect each shipment, and only check the item numbers in the bill of lading, since the import of equipment is arranged through reliable international companies, where the status of the shipment cannot be changed before arrival, which does not justify the procedures of re-examination and the long duration it takes the equipment and supplies to enter.

o Ministry of Telecommunication and Internet Information:

1. Regulate the hardware market by limiting the trade in equipment to the companies officially registered by the Ministry of Telecommunication and Information Technology thus enhancing their ability to control and regulate the market in order to ensure the availability of quality and technical specifications to achieve security, safety and consumer protection which occurs in coordination with the Ministry of National Economy.

2. Set a price floor for the services provided while monitoring the extent of the companies compliance with this.

3. The Ministry of Communications and Information Technology needs to continuously educate the hardware companies on the advantages and disadvantages of some devices, equipment and the harms related to them, while following up and keeping pace with the global developments in the field of ICT.

o Palestinian Information Technology Association- PITA:

1. Raise hardware companies awareness concerning the legal aspects and the procedures concerning import, shipments and customs clearance. Raising awareness should also include the importance Providing information on the international markets and exhibitions and linking the local to the global companies that produce the hardware equipment. This can be achieved through synchronizing with the related ministries and chambers of commerce.

2. Organize and arrange for training of ICT professional abroad to obtain advanced knowledge and skills in the field of maintenance of hardware, especially modern equipment through coordination between

PITA and the Ministry of Communications and Information Technology and through funding provided by donors.

3. Raise awareness among hardware companies about the importance of having "temporary spare parts" to be available to ICT service providers in case of damage or disruption occurring to sensitive equipment such as routers and switches to ensure that services are not interrupted until the equipment is repaired and maintained or until they are replaced by new ones

4. Communicate with the Ministry of Finance and the Ministry of National Economy in Gaza to form a joint coordination committee to review all types of duties and taxes imposed on hardware devices.

5. Increase the level of coordination and communication between ICT companies, in general.