Infrastructure

Palestinian infrastructure suffers from restricted access to land and water, power generation, and Israeli discriminatory policies. Investment in infrastructure (water, electricity, transportation and telecom networks, airports, seaport, and industrial parks) has been laid down as one of the policy interventions to pursue national priorities in the PA's National Policy Agenda for 2017-2022.

11.1 Housing & Construction

- As of June 2018, 10.4% of the **employed persons** in the WBGS were working in construction (WB: 13.4%, GS: 3.6%, Israel/settlements: 61.6%) (PCBS, *Labor Force Survey*, Q2-2018). Palestinian construction is **constrained** by **access to raw materials and building supplies**, especially in Gaza.
- In 2017, there were 627,383 **buildings** (WB: 441,280, GS: 186,103), including 26,338 **under construction**, with a total of 1,129,264 **housing units** in Palestine (PCBS, *Population, Housing & Establishments Census 2017 – Final Results, Building Report*, 2018).
- In 2017, 85.6% of tenants **owned** their homes, 8.5% **rented** it, 5.8% lived **without payment,** and the remainder used it for work or other purposes (*Ibid.).*
- In 2017, the **average area of a housing unit** was 130 m^2, with 16% of households having 80 m^2 or less and 9% 200 m^2 or more (PCBS, *Press Release on the Occasion of Arab Housing Day*, 2 October 2018).
- In 2017, 61.5% of the Palestinian **housing units** were **apartments**, 35.3% **houses**, 1.1% **villas**, 0.5% **independent rooms**, and 0.1% **tents**. Some 44.7% of households live in a **house or villa** (WB: 55.5%, GS: 25.1%) and 54.4% in an **apartment** (PCBS, *Population, Housing and Establishments Census 2017: Census Final Results Summary,* May 2018).
- The average **number of rooms** per housing unit is **3.6**. Some 16% of households live in units with only 1-2 rooms, 20% in units with 5+ rooms (*Ibid.*).
- The average **housing density** was **1.4** persons per room (WB: 1.2, GS: 1.6). In 7.4% of the households **three persons or more** lived per room (WB: 4.9%, GS: 11.7%) (*Ibid*).
- The **average monthly rent** for a housing unit (excl. Jerusalem) was 161 Jordanian Dinars in 2015 (WB: 179.9 JD, GS: 104.6 JD) (*Ibid.*).
- During 2017, the number of **building licenses** decreased by 13.1% compared to 2016, totaling 9,242 licenses, 64.3% of which are issued for new buildings (PCBS, *Performance of the Palestinian Economy, 2017,* May 2018). The vast majority of issued **building licenses** is provided to **private owners** and for **residential** purposes (PCBS, *Building Licenses Statistics*).

Number and Area (in 1,000 m^2) of Licensed Housing Units, 1997-2017

Housing Units (HU)	1997	2003	2009	2014	2nd Q. 2018
No. of New Licensed HU	13,230	8,152	5,874	13,777	6,774
Area of New Licensed HU	1,768	1,234	1,121	2,546.1	1,138.3
No. of Existing Licensed HU	2,759	1,671	1,501	3,053	2,156
Area of Existing Licensed HU	391.8	175.8	322.9	500.7	329.2

Source: PCBS, *Building Licenses Statistics 2nd Quarter 2018*; Refugee camps and Jerusalem are excluded.

- Construction contributed 6.4% to the 2nd Quarter 2018 **GDP** (excl. East Jerusalem) (WB: 6.6%, GS: 5.6%) (PCBS, *Quarterly National Accounts,* Q2-2018).
- As of June 2018, over a third of the homes in Gaza that sustained some type of damage during the 2014 assault (~59,000 of 171,000) are **yet to be repaired** (OCHA, *Monthly Humanitarian Bulletin*, June 2018).
- Nearly 80% of the 17,800 houses, which had become uninhabitable due to damages sustained in 2014, have been **rebuilt**, but there is a **funding gap** of some $100 million for the reconstruction of over 2,500 totally destroyed houses (home to 16,500 people). An additional $78 million is still needed to repair 56,000 **partially damaged** houses (UNSCO, *Report to the AHLC*, Sept. 2018).

11.2 Electricity & Energy

■ Overview:

Due to stipulations in the otherwise defunct Oslo Accords, Palestinian production and import of energy is very limited, leaving the sector highly **dependent on energy imports**.

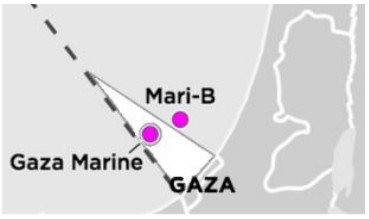
The **West Bank's electricity system** has no generation capacity or transmission network but consists of numerous isolated distribution systems to which power is supplied by the Jerusalem District Electricity Company (JDECO), Hebron Electric Power Co. (HEPCO), Southern Electric Co. (SELCO), and Northern Electricity Distribution Co. (NEDCO). Demand for **electricity** in the West Bank is expected to reach approx. 1310 MW by 2020 (in 2016, 860 MW were available).

The **Gaza Strip** is supplied with **electricity** from three main sources: the Israel Electricity Corp. (about 60% of the total supply), Egypt, and the Gaza Power Plant. The severe electricity shortages in Gaza cause a daily average of 19-20 hours of blackout. As of September 2018, the supply of electricity from Egypt (suspended due to technical malfunctioning) was not restored, and the Gaza Power Plant produced a maximum of 20 MW of electricity daily (due to the lack of funds to renew its fuel reserves), while 120 MW are purchased from Israel. It is estimated that Gaza needs 500MW/day it currently receives 120-140MW/4 hours/day (UNSCO, *Report to the AHLC*, Sept. 2018).

Fuel is supplied to the terminals in Nilin (for LPG) and Deir Kadiz (other fuel types) from where it is distributed through the Palestinian Petroleum Commission (PPC). Since there is no **storage capacity** for petroleum products in the WBGS, fuel is transferred on a day-to-day basis.

Solar power is particularly attractive as an independent form of power supply and due to the given high solar irradiation, but restricted access to land for solar power generation is a constraint for its development (World Bank, *Economic Monitoring Report to the AHLC*, May 2017).

In recent years, lots of **natural gas** was discovered in the Mediterranean. **Egypt** began producing from its Zohr field (850 billion cubic meters), **Cyprus** is developing its Aphrodite field (140 BCM), and **Israel** has the Tamar field (280 BCM) operating and Leviathan (626 BCM) ready to go in 2020. In **2019**, Israel's government company Israel Natural Gas Line is expected to finish laying a **pipeline to Jordan** and to resume **gas exports to Egypt** through the abandoned pipeline between Egypt and Israel (via a deal by Israel's Delek Group and Noble Energy of the US). There are also plans for a projected 2,100-km, $7 billion EastMed Pipeline to deliver Israeli and Cypriot gas to Europe via an undersea pipeline (Rosenberg, David, "Israel Selling Gas to Egypt: Mark of the Real New Middle East," *Haaretz,* 27 September 2018).

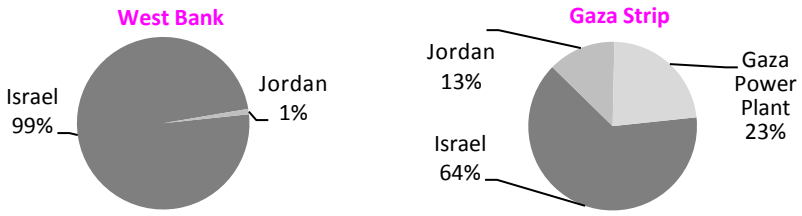


Gaza's own gas field ('Gaza Marine'), 36 km off shore, would significantly add to the WBGS's energy security and generate income, but ways to make use of it and generate energy have yet to be developed (*Ibid.*).

■ Facts & Figures:

- In 2017, the main **source of electricity** for 98.4% of the Palestinian housing units was the **public network** (WB: 97.5%, GS: 99.9%) (PCBS, *Population, Housing & Establishments Census 2017: Census Final Results Summary,* May 2018).
- Most of the Palestinians **electricity supply** is imported (in 2016 91.1%, PCBS), mainly from Israel (World Bank, *Economic Monitoring Report to the AHLC,* May 2017). Almost one third (32%) of all **electricity consumption** in the WBGS is commercial (USAID, *West Bank and Gaza Inclusive Growth Diagnostic,* May 2017).

Main Sources of Electricity



Source: World Bank, *Economic Monitoring Report to the AHLC*, May 2017.

- The electricity sector suffers from operational and financial problems due to high **losses** and low collection rates. In 2015, consumers were billed for 76% of the power they purchased while the other 24% were lost due to the **poor infrastructure**, **illegal connections**, and **theft** (World Bank, *Economic Monitoring Report to the AHLC*, May 2017).
- **Gas** is the **main fuel** used for **cooking** (92% of all households), **electricity** for **baking** (48.7%) and **water heating** (60%). **Solar heating** is available for 56.7% of the households. For general **heating**, 64.3% use a heater, 10.7% a fire place and 2% central heating (PCBS, *Household Energy Survey,* 2015).
- **Electricity, gas, steam, and air conditioning supply** contributed **1.0%** to the 2nd Quarter 2018 **GDP** (excl. East Jerusalem) (WB: 0.9%, GS: 1.4%) (PCBS, *Quarterly National Accounts,* Q2-2018).

11.3 Transportation & Roads

- As of June 2018, 6.8% of all **employed** Palestinians (WB: 6.1%, GS: 8.4%) were working in the field of transportation, storage, and communications (PCBS, *Labor Force Survey,* Q2-2018).
- As of June 2018, the transport & storage sector contributed **1.7%** to the **GDP** (excl. East Jerusalem) (WB: 1.7%, GS: 1.6%) (PCBS, *Quarterly National Accounts,* Q2-2018).
- In 2017, 12,368 persons were **employed** in the field of transportation (WB: 9,067, GS: 3,301) marking a slight decrease over 2016 (=12,656). There was a total of 11,726 operating **vehicles** (WB: 8,507, GS: 3,219) – 91.3% of which were for public transportation, 6.1% for private transportation and 2.6% for **freight** (PCBS, *Transport Survey - Outside Establishments 2017,* June 2018).
- In 2017, there were 1,113 licensed **repair workshops** in the West Bank, as well as 530 **vehicle trading shops** and 440 **spare parts stores** (PCBS, *Transportation & Communication Statistics 2017,* July 2018).
- In 2017, there were 299 **driving schools** in the West Bank, with 980 trainers and 1,435 vehicles; throughout the year, 42,727 **driving licenses** were issued (*Ibid.*).
- In 2017, 11,541 **road accidents** were registered in the West Bank (up from 10,630 in 2016), which left 108 people dead (down from 159 in 2016) and 9,316 injured, 168 of them seriously (*Ibid.*).

- The Palestinian **road network** is with some 77.8 km per 100 km^2 extremely **dense** compared to others in the MENA region (average 11.4 km) and second only to Israel (85.8 km) (USAID, *West Bank and Gaza Inclusive Growth Diagnostic*, May 2017).

Vehicles

- In 2017, there were 228,324 **licensed road vehicles** in the West Bank (the latest available figures for Gaza are from 2012), about half of them driving on **Diesel**. Of the total, 36.3% were licensed in the Ramallah/Al-Bireh, 17.4% in the Hebron, and 14.9% in the Nablus Governorate. 2.6% were **new models** (from 2017), while 38.9% were from before 2008 (PCBS, *Transportation and Communication Statistics 2017,* July 2018).

Licensed Road Vehicles (excl. East Jerusalem)		
Vehicle Type	**West Bank (2017)**	**Gaza (2012)**
Private cars	181,012	38,981
Trucks/commercial cars	30,252	11,091
Buses (public/private)	2,083 (973/1,110)	650 (289/361)
Taxis	9,486	2,160
Motorcycles/mopeds	1,378	16,735
Tractors	789	720
Trailers/Semi-trailers	2,971	605
Others	353	1,944
Total	**228,324**	**72,886**

Source: PCBS, *Transportation & Communication Statistics 2017,* July 2018, & 2012.

Roads (excl. Israeli bypass roads)

Network Length of Paved Roads (km)	West Bank (2017)	Gaza (2014)
Main roads	663.6	76
Regional roads	1,149.0	122
Local roads	1,484.8	99
Total	**3,297.4**	**297.0**

Source: PCBS, *Transportation and Communication Statistics 2017,* July 2018.

11.4 Communication

The **international dialing code** for Palestine is **970** (since 21 June 1999).

The main network operator is the **PalTel** group (Palestinian Telecommunications Co.), a public shareholding company in which the PA has a 10% stake and which includes fixed-line operations, **Jawwal** (first Palestinian cellular phone service launched in 1999), and the data operator/internet service provider **Hadara**. It also controls other companies, such as the IT company **Hulul**. Since 2009, **Ooreedoo Palestine** (formerly **Wataniya** Telecom) competes with the PalTel group.

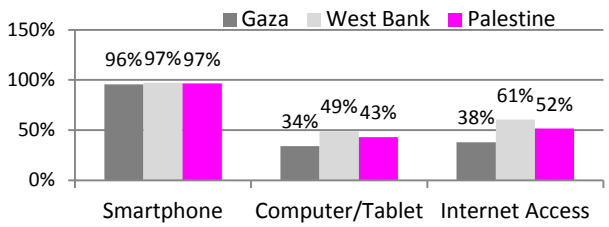
The ICT sector has been one of the fastest growing sectors in the Palestinian economy, but is severely hampered by restrictive Israeli measures regarding frequencies, import of equipment, infrastructure, poor access to 60% of the West Bank (=Area C), unauthorized competition through Israeli operators who offer services to settlers (Who Profits, *Signal Strength: Occupied the Telecommunications Sector and the Israeli Occupation,* July 2018), and, to a lesser extent, by weak governance and regulation. **Internet penetration** in Palestine is estimated at 61%, compared to 80% in both Jordan and Israel

(IMF, *Report to the Ad Hoc Liaison Committee*, March 2018). On 5 April 2017, the PA Telecommunications Ministry and the Israeli Ministry of Communication signed a memorandum of understanding, finally releasing **3G** to the West Bank. In **Gaza**, Ooreedoo launched building a **2G network** on 24 October 2017. As of 1 September 2018, these new services were used by over 30% of Jawwal customers in the West Bank, and the Ooreedoo subscriber's base increased by 58%, generating new sources of revenue for the PA, including US$ 266 million in Jawwal's licenses and a US$1.4 million increase in VAT paid by Ooreedoo (Office of the Quartet, *Report to the AHLC*, Sept. 2018). The deployment of the 2G/ 3G increased also the revenues of the providers and created new business ventures as well as an estimated 150 direct and 1,000 indirect job opportunities in Ooreedoo's sales channels alone *(Ibid.)*.

On 28 October, the Israeli Defense Ministry's Civil Administration approved the request by Paltel to purchase a number of **circuit boards** (otherwise banned as "dual use" goods) in order to expand the firm's network coverage and speed up cellular internet service.

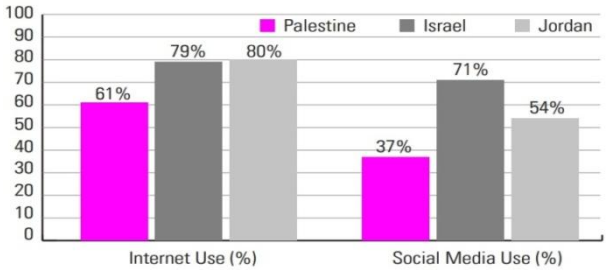
Facts & Figures:

- The Information and Communication sector contributed **3.7%** to the 2nd Quarter 2018 **GDP** (excl. East Jerusalem) (WB: 4.7%, GS: 0.5%) (PCBS, *Quarterly National Accounts,* Q2-2018).
- As of June 2018, 6.8% of all **employed** Palestinians (WB: 6.1%, GS: 8.4%) were working in the field of transportation, storage, and communications (PCBS, *Labor Force Survey,* Q2-2018).
- In 2017, there were 1,008 **enterprises** in the Palestinian IT and communication sector (WB: 629; GS: 379), **employing** a total of 9,200 people (PCBS, *Population, Housing & Establishments Census 2017*, 2018).
- In 2017, 84.2% of Palestinian households owned a **smartphone**, 43.1% a **computer** or **tablet**, and 51.7% had **internet** access at home (PCBS, *Press Release, International Day for Telecommunication & Information Society,* 17 May 2018).



- In 2017, there were 18 **companies** for WIFI, 5 for connections to the IP telephony (VOIP), 9 for Broadband Internet connection, 13 BSA Broadband access companies, and 32 value-added service providers as well as 69 registered companies for importing communications equipment *(Ibid.).*
- In 2017, there were 326 **mail service centers** as well as 12,890 **post boxes** in the West Bank (PCBS, *Transportation and Communication Statistics 2017,* July 2018).
- In 2017, there were 472,300 fixed **phone lines** (WB: 70.3%), 3,997,206 **mobile phone** subscriptions, and 357,071 **ADSL lines** (WB: 73.1%) (*Ibid.*).
- As of Nov. 2018, **Al-Jawwal** had 3,000,000 **subscribers** in the WBGS and **Ooreedoo** had 1,264,000.

Internet & Social Media Usage, 2017



Source: Social Studio, 2017, quoted in Portland Trust, *Palestinian Economic Bulletin No. 138,* March 2018.

Recommended Research Sources:

http://www.pcbs.gov.ps (see Housing, Building, Transport)
http://www.sunergy.ps/en (renewable energy)
http://www.penra.gov.ps (Energy & Natural Resources Authority)
http://www.mtit.gov.ps (Ministry of Telecommunications)
http://www.mpwh.pna.ps (Ministry of Public Works & Housing)
http://www.mot.gov.ps
http://www.paltel.ps
http://www.ooredoo.ps/
http://www.jawwal.ps
http://www.perc.ps (Electricity)

Abu Shanab, Anan, *Hashtag Palestine 2017: Palestinian Digital Activism Report,* March 2018.

Al-Haq, *Annexing Energy - Exploiting and Preventing the Development of Oil and Gas in the Occupied Palestinian Territory*, 2015.

Office of the Quartet, *Economic Impact of Mobile Communications Development on the Palestinian Economy*, 2017.

Office of the Quartet, *Effective Housing Demand Survey: West Bank*, n.d.

Simply unsustainable! The EU's energy projects with Israel, Pengon & Friends of the Earth Palestine, Feb. 2018.

USAID, *West Bank and Gaza Inclusive Growth Diagnostic*, May 2017.

Who Profits, *Signal Strength: Occupied the Telecommunications Sector and the Israeli Occupation,* July 2018.

World Bank Group, *The Telecommunication Sector in the Palestinian Territories: A Missed Opportunity for Economic Development,* 2016.

World Bank Group, *Securing Energy for Development in West Bank and Gaza,* June 2017.

World Bank Group, *Tech Start-up Ecosystem in West Bank and Gaza,* March 2018.