Supporting Jerusalem Youth in Accessing the Tech Job Market

By Eyad Al Araj

The mismatch between supply and demand for jobs in the high-tech industry is greatly influenced by the higher education system.

East Jerusalem is recognized as being underserved compared to other areas of Palestine in terms of innovation and the digital ecosystem. Current offers do not meet demands, especially for the large number of young people who lack real pathways to employment. The unemployment rate among Palestinian computer science and computer engineering graduates is high due to skills gaps that arise from limited links between universities and the industry and from a lack of research labs and equipment, making access to the job market difficult.[i]

According to the Palestinian Central Bureau of Statistics,[ii] eleven Palestinian universities provide the Palestinian market with approximately 3,000 engineering and computer science graduates per year, which is equivalent to 8.2 percent of the yearly net labor force increase. But recent graduates from Palestinian universities, especially women, suffer because of the high rate of unemployment. In 2018, the unemployment rate among computer science graduates was 43 percent among males and 75 percent among females; for engineering graduates it was 39 percent among males and 69 percent among females in the West Bank and Gaza.[iii]

As the IT services sector in the West Bank and Gaza has been growing at 6 percent annually since 2010,[iv] more than 20,000 direct and indirect workers (0.4 percent of the employed labor force) were employed in more than 1,000 establishments, mainly working in the information- and communications-technology sector in 2017,[v] which contributes an estimated 7 percent of the overall GDP.[vi] More than 5,000 graduates in the fields of computer science or computer engineering from Israeli universities are entering the labor market each year. Approximately 17 percent (or around 850 to 1,000) are Palestinians who hold Israeli citizenship; of these, a further subset of 3.4 percent (around 290 to 300) are from East Jerusalem. Hence, a total of 680 Palestinians from East Jerusalem were actively employed or engaged in the Israeli high-tech sector.[vii]

Furthermore, the demand for high-tech employees has grown as well, with an estimated 18,500 open tech positions in the Israeli technology industry as of July 2019, an increase of 8 percent compared to July 2018. The percentage out of the overall number of high-tech employees amounted to about 12 percent in 2019.[viii]

The skills gap – which refers to specialized technical skills, practical training, soft skills, and creative thinking – found among computer engineering and computer science

Jerusalem Hi-Tech Forum
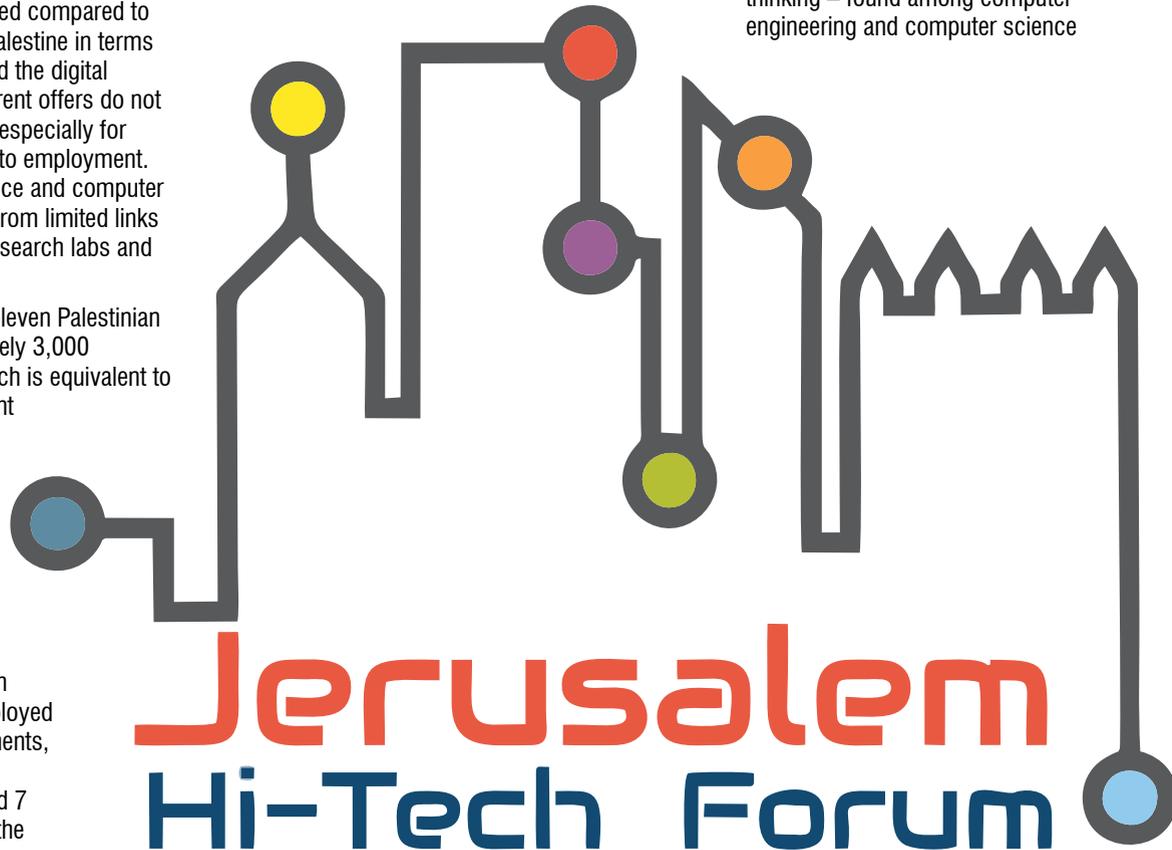
graduates is due mainly to the rapidly increasing output factor of higher education that has not been aligned with the number of available vacancies in the labor market. The university output has maintained a traditional emphasis on technical professions but has gradually diverged from the demands of the private labor market. Thus, this deficiency is partly a result of the rapid enrollment increase in tertiary education while the necessary adaptation of curricula and the alignment of professional training with the needs of the private sector have not taken place.

As the high-tech sector's demand for talent is rapidly increasing and not matched by the supply of skilled programmers and engineers, the COVID-19 pandemic has highlighted the importance of investing in new technology, facilitating remote work, and preparing or maintaining the tech-savvy workforce that is needed to make it all happen.

Accordingly, the Jerusalem High Tech Foundry (JHF) has developed a special program that is based on an assessment of market needs, conducted in early 2021 in consultation with local and global high-tech companies. Studying employers' demands, it identified the skill sets that allow job applicants to remain competitive and meet the challenges of a fast-moving digital landscape, also considering the available jobs forecasted for the coming years.

Given the difficult context of young Palestinians, income-generating opportunities that can flourish despite potential physical, political, and social restrictions are all the more important to provide them with a reliable income. Ensuring that such opportunities become widespread

Jerusalem High Tech Foundry focuses on building a new modality of learning to facilitate a stronger linkage between the curricula taught at universities and the needs of the workplace. In addition, the flexible model can respond to the needs of companies, because each high-tech job has its own specificity.

and sustainable, especially in a new market such as East Jerusalem, requires – beyond technical training – a holistic "ecosystem" approach that develops an overall enabling environment and provides aspiring tech workers with the appropriate skills and knowledge, a supportive leadership, a conducive culture, and access to the appropriate financial and human resources required for success.

JHF aims to further increase internet-enabled work opportunities by strengthening multiple pillars simultaneously: technical talent, professional skills, and cross-cutting support for a strong, inclusive community, including the entire Jerusalem governorate. The organization thus follows the strategic direction of expanding the education-focused verticals of its tech employability program through

JERUSALEM HIGH-TECH FOUNDRY

the educational training program that enhances marketable twenty-first-century skills and tech-focused skills while strengthening professional skills and connections to the online global marketplace that are aligned directly with market demands.

The technical training is designed to be flexible in the topics that are covered and in the training approach and its duration, which ranges from 90 to 320 hours in three categories, short, medium, and long-term. Using the hybrid modality (face-to-face as well as virtual classrooms), tailor-made training content ranges from basic to advanced topics that are in high demand. Topics include front- and back-end software development (both web and mobile) for IOS and Android, software quality assurance, data analytics, cloud systems, data science, artificial intelligence, and more.

The training serves as the foundation for enabling the growing Palestinian youth population to

remain competitive in the online global marketplace that is a key driver of employment opportunities through direct hiring or the freelance track, helping youth and young professionals overcome the various political and geographic challenges that affect Palestine.

Thus, the technology sector leverages more sustainable and inclusive economic development for young women and men in East Jerusalem and in Palestine, supporting them in accessing decent job opportunities.

Eyad Al Araj, a co-founder of Jerusalem High Tech Foundry, has a long career in international development, over 20 years of extensive senior managerial experience in the nonprofit sector, and a record of success in getting initiatives off the ground and ensuring that they flourish.

[i] State of Palestine, Palestinian Central Bureau of Statistics, "Study on the gap between education and the labour market," 2019, cited in The World Bank, "Technology for Jobs (P172571)," February 2020, available at https://documents1.worldbank.org/curated/en/863981586614238910/pdf/Project-Information-Document-Technology-for-Jobs-P172571.pdf.

[ii] Ibid.

[iii] The World Bank, "Technology for Jobs," 2020, p. 18.

[iv] "Palestine Digital Industry Brief: Digital Palestine – An Emerging Technology Services Delivery Hub," Palestinian Market Development Programme, October 2018, p. 15.

[v] "Joint press release on the eve of the World Telecommunication and Information Society Day 17/05/2021," Palestinian Central Bureau of Statistics and The World Telecommunication and Information Society, available at https://www.pcbs.gov.ps/site/512/default.aspx?lang=en&ItemID=3989).

[vi] "Palestine Digital Industry Brief," p. 6.

[vii] "Jerusalem Hi-Tech Labour Market Assessment," 2017.

[viii] "2019 High-Tech Human Capital Report," Israel Innovation Authority, February 26, 2020, available at https://innovationisrael.org.il/en/news/2019-high-tech-human-capital-report.