The Sector of Hope

Palestine's Hi-Tech Industry

By Yahya Al-Salqan

During the 1960s and 1970s, Palestinian educators throughout the Arab world were helping in the creation of many modern countries. In the 1980s, Palestinian universities became the first choice for Palestinians to receive their higher education, including engineering and technological sciences. In the 1990s, especially after the formation of the Palestinian National Authority (PNA), many software companies were established. Towards the end of the year 2000, the second Palestinian Intifada started, and it continued for many years. Even during those harsh days almost all the Palestinian hi-tech companies resorted to the cyber world. Today, Palestinian hi-tech companies are the only ones in the Arab world that have an R&D relationship and engage in projects with many multinational companies. Microsoft Cortana, the speech interface of Microsoft's mobile operating system, is developed in Ramallah. The Intel Small Business Advantage (SBA), more than 40 million copies of which were sold worldwide by Intel, was also developed and maintained by Palestinian engineers. In addition, many other similar projects are being executed by Palestinian companies for the benefit of such businesses as Cisco, HP, Fujitsu, and Oxford University, to name just a few. The majority of Palestinian homes are equipped and linked to the Internet, and the usage of smartphones is growing fast, beating their economic abilities and GDP math and statistics. Almost every year, Palestinian universities release 3,000 graduates with computer engineering and science degrees into the job market. I believe we have a choice to make: either we utilize this flux of engineers to build a knowledge- and innovation-based

economy, or we convert them into a new wave of migrants. I argue, based on almost 20 years of experience in this field, that Palestine is in need of all possible talent in order to build a smart, hi-tech, innovation-based economy. I would even argue that we really have no other choice but to capitalize on our human capital where hi-tech is a clear manifestation of our talented young nation.

I know it's not easy. It involves the government, the private sector, and the educational apparatus to build a successful economy. We, for example, at the Palestine Information Technology Association of Companies (PITA), believe that we carry a heavy burden on our shoulders. On the one hand, we need to continue the growth we have witnessed during the past several years and create more jobs, especially for our fresh graduates. We must expand our market reach beyond the Palestinian market both regionally and internationally; we must work with the government to foster an innovation-supporting environment by changing the legal and legislative framework to include more progressive laws, convert governmental services to e-services, and allow innovative solutions to find their way into government services and solutions. In addition, we must give priority to the local hi-tech sector, especially to software solutions.

The private sector has done a great job in developing the hi-tech industry.

The private sector and government need to continue to expand their current efforts to create an innovation-enabling environment by providing incentives to the hi-tech sector, enacting the Telecommunications Regulator, and making sure that our organizations are using local products and solutions. I am confident that the introduction of 3G service, hopefully soon, will be a push towards more mobile apps and innovations.

For example, during the second Intifada, the vast majority of the IT private-sector companies endured the hardships associated with many years of closures, some of them actually continued to hire during those years. Recognizing the importance of innovation and the role that startups play, PITA established the non-profit incubator Palestine Information and Communication Technology (PICTI.StartUPs). Since 2002, PICTI.StartUPs has been nurturing the startups ecosystem and providing the needed training in order to put entrepreneurs on track to succeed.

Internet service provision is another good example that shows the willingness of the private sector to invest heavily in this high technology. Before 2010, we had only a few Internet Service Providers (ISPs); today, after the introduction of the bitstream access model, we have around twenty, which constitutes an increase of more than 200 percent. The cost of the Internet has dropped by at least 4000 percent, and the average Internet speed has jumped from 128 Kbps to 8 Mbps (a 6250 percent increase), whereas the number of Internet users has increased more than 200 percent. Of course, this progress could not have been achieved without the huge investment that has been put forward by the private sector. In fact, many ISPs are still investing in infrastructure even though they need to recoup their original investment. Thus, the infrastructure for Internet delivery through fiber and broadband has been significantly revitalized and modernized to the point that the delivery of high-speed broadband is now attainable.

Mobile operators show great perseverance as they continue to invest in infrastructure; they have done all that is needed to invest in a 3G network, even though they are lacking access to frequency and are severely hampered by heavy restrictions imposed on the import of equipment, especially to Gaza. Even though almost a year has passed since an agreement was signed with Israel stipulating the release of 3G frequency, Palestinians have yet to experience 3G service – while users worldwide are embracing and enjoying 4G networks.

As the private sector is ready to further invest in hi-tech infrastructure and its related services, the good news is that, under PITA's leadership, a solid partnership exists with the government.

Nevertheless, there remain a number of highly important issues that must be resolved in order to enable this sector to continue its growth: The Telecommunications Regulator is yet to be established. The "law on the encouragement of investment" came up short in acknowledging in its last amendment the fact that the hi-tech sector's main assets are human capital and the R&D effort – and not machinery or any other type of assets. Palestine suffers from the lack of a legal framework to drive e-commerce, e-government, and mobile payment such as e-signature; there is an urgent need for laws to address such issues as anticompetitive practice, e-crime, and cybercrime, just to name a few.

It is my belief that the ICT sector (hi-tech sector) is our main hope for an innovation- and knowledge-based economy. The Palestinian brain is our treasure, and the hi-tech sector is the embodiment of the creative output of our collective national brain. The question is: Will we be able to pull it off and truly build a modern society? Are we truly ready for an innovation-based economy? I think we can, we should, and we are because I think we have no other options.

Let's hope that 3G service will be launched soon. I would like to call upon all sectors of our society to take advantage of this important change: banks could provide FinTech – financial services with better utilization of technology; government could provide e-gov and m-gov services; the educational sector could improve the digitization and modernization of the educational and school system; entrepreneurs could provide mobile solutions and apps to address the challenges we face in daily life and business. Needless to say, lots of work

is required to revitalize, or even start, our health informatics system.

We are not the only ones in the region who look towards hi-tech as an important factor for economic development. Lebanon for example, a country with which Palestine shares several commonalities, has recently launched a $400 million stimulus package for banks called Circular 331 that aims to boost investment in startups. It has worked. Today, the entrepreneurship scene in Lebanon is unrecognizable compared to what it was three years ago. Circular 331 encourages investment in local startups by offering to private banks seven-year interest-free government loans that can be invested in treasury bonds. The deal is that the banks must then invest their own money (up to 3 percent of their total capital holdings) in local startups, either via funds or directly. The central bank guarantees 75 percent of any capital invested. The program's main objectives are to slow and eventually reverse Lebanon's famous brain drain and stimulate entrepreneurship. Circular 331 has, by and large, significantly reduced the capital hurdle that Lebanese entrepreneurs had been facing in the past. There are now investors, accelerators, incubators, and startups in the entrepreneurship ecosystem that create a pipeline of startups and supporters at and for different stages of growth. In a nutshell, Circular 331 has changed the landscape of technology and entrepreneurship in Lebanon. Jordan, on the other hand, has canceled taxes on the hi-tech sector, which has provided a significant push to the Jordanian ICT sector that is hoping to become more competitive not only in Jordan but also in the region. Since Lebanon and

Jordan – whose borders and airports are open for export and import, who own their own frequencies, and who are wide open for all the Gulf businesses – are doing all the above, don't we need to do the same or even more?

Finally, I believe that the development and advancement of the Palestinian hi-tech sector is a national security and sovereignty issue. It should no longer be accepted that this sector has no incentives. And this is a call to our organizations, government, businesses, banks, and NGOs to measure the level of modernizing their systems and what percentage of which are local products. If Intel, Cisco, Microsoft, and many others trust Palestinian talent, don't we also need to hire our hi-tech solutions?

I believe that we have all the success components to build a modern Palestine. I am hopeful.

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