Palestine and ICT Offshore Sourcing: from CSR to Long-term Economic Impact

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Abstract[1]

Over the last decade, the ICT-sector in Palestine has shown continuous growth in products and services. Thirteen universities have IT-faculties, with 2500 yearly graduates. There are more than 300 ICT-related companies, both in the West Bank as in Gaza, with a total of around 5000 employees. Palestine is also an upcoming outsourcing destination, and some of the local companies work solely for foreign clients. Well-known users of Palestinian IT services are Alcatel-Lucent, Volvo, HP, Intel and Cisco.

Palestine had direct experience of one aspect of social outsourcing, namely large US technology companies using CSR to help develop the Palestinian technology outsourcing capability and hence impacting the Palestinian economy. Cisco started outsourcing to Palestine because of a CSR-related project (with a focus on job creation; cooperation between Israeli and Palestinian teams). Also various international NGO's, using funding from western Governments, are conducting projects in order to strengthen the local outsourcing sector (e.g. USAID, GIZ, CBI, EU, DFiD). There are also other examples of CSR-related activities, related not only to outsourcing but also to training.

The challenge for countries receiving this type of support is to turn it into a real advantage for the country which involves three key areas:

- Developing a positive reputation for reliable cost effective services in a wider market, be that a company level or individual developer
- Finding international channels to market to sell these new services
- Growing the opportunity to engage a larger number of people in the outsourcing process, thus improving the overall GDP per head of a country, irrespective of the model.

We will examine the background to CSR in Palestine and how it has developed and scrutinise the following key factors that are vital to growth and a long-term economic impact:

- The technology infrastructure including both the organisation to be able to sell and deliver services as well as the local technical and social infrastructure to allow the population to participate in the outsourcing development
- The education and skills requirements that allow outsourcing services to grow and indeed develop from low level lower paid services to more value add services
- The political and legal infrastructure required for realistic outsourcing growth, not least relating to contract law and protection of intellectual property, and in the case of Palestine the ability to physically cross borders
- The role of external governments, local charities and NGO's in developing outsourcing, along with the willingness of the funders to develop IT sourcing across the population
- The willingness of foreign companies to consider CSR activity and commercial contracts to developing territories.

[1] This paper was presented at the workshop: 'IT Sourcing and Development: New Drivers, Models and Impacts' (20 – 21 October 2014), organized by the Socially Responsible Outsourcing Unit, Centre for development Informatics, University of Manchester, UK

Additionally we will consider individual “social” contract outsourcing in the region and how that is used to develop skills and to provide local income streams

Our approach is practical based upon working in the region with the industry and directly supporting the development of the technology sector, particularly software and semi-conductor design outsourcing.

1. Palestine: a potential ICT outsourcing destination

Palestine has a small local market (especially with limited government and public sector spending), and ICT sector stakeholders agree that the sector’s growth lies in the effective engagement with international markets. Additionally, due to the restrictions imposed by Israel, particularly on the movement of Palestinian people and goods, the reduced transaction costs compared to other industries in Palestine and the increased reach of the ICT industry provide Palestine the opportunity for continued economic development and resilience against restrictive policies.

Some Palestinian firms have been able to get a foothold in markets beyond Palestinian borders, a high proportion is with Israel and they have created reputation for reliability and quality in the Middle East, Europe and North America. Other Palestinian companies have been exporting software products to markets such as Saudi Arabia and United Arab Emirates. A few of the Palestinian ICT firms have also setup subsidiaries abroad. Apart from this, some major western enterprises such as Intel and Siemens have setup joint ventures with Palestinian ICT firms to do R&D work from Palestine.

In the last five years, the West Bank’s ICT industry has had a number of notable successes with international companies including Cisco, HP, Intel and Google (mostly through their offices in Israel), as well as several Israeli companies that contract work to West Bank companies. Israel is by far the largest market for West Bank’s ICT exports. Industry insiders suggest that the ICT export values have experienced a surge and may currently amount to approximately $ 20 to $ 50 million (this amount has been growing: PITA estimated in 2008 that West Bank companies exported ICT services valued at $ 15 million). While that is significant, it seems safe to conclude that the Palestinian ICT sector’s market for both software and hardware products at present remains predominantly local.

2. The role of CSR in building a Palestinian outsourcing industry

Several foreign relationships with Palestinian companies did not start because of business reasons, but because of CSR (Corporate Social Responsibility) initiatives. Linkages based on CSR has been utilized successfully in the West Bank ICT sector, which has built relationships with well-branded international companies, including Cisco from the United States.

2.1 The West Bank ICT-sector and CSR

Cisco, the US networking company was an important catalyst in developing the Palestinian software outsourcing market through it CSR initiative. It is interesting to note that it was a fortuitous event that led to the first projects. John Chambers, the founder and CEO of Cisco was visiting Israel, an important source of innovative companies in the networking field. He also visited West Bank and

saw the potential of the industry there as well as the problems in the territory. It was based upon this experience that he pushed for Cisco to do something. In a recent Forbes article he said[2]:

> *"The way to end this conflict is to create a very large middle class and be inclusive in how you go after it across all individuals, regardless of age, religion or gender," says John Chambers, CEO of Cisco, the most actively involved American tech executive in a coordinated effort that includes de facto diplomats from the likes of Intel, Hewlett-Packard and Microsoft. "If you can address those issues and you can get others involved, then you can have a shot at peace in the Middle East."*[1]

Thus it was a social view as well as a recognition of the reality on the ground and the potential of some of the organisations that led to the CSR initiative.

The implementation was multi-faceted; developing actual working contracts between Cisco Israel and Palestinian outsourcing companies, funding IT start-ups through a local organisation called PICTI and providing training students and engineers in both technology and business.

The business contracts were facilitated through PITA and chosen NGOs and involved letting out six contracts, funded by Cisco CSR, to three Palestinian software companies, chosen through a selection process. The deal involved training and development as well as definable business goals; in short all three companies performed and with a reasonably short period had moved the relationship from this CSR funded route to a full commercial basis.

Business aspect aside Chambers and the supports of the initiative (and there were/are detractors from both sides) were looking to create a human relationship as well. In interviews of the participating companies conducted after the contracts had gone commercial, the overwhelming sense was we now see each other as human beings and people, rather than soldiers or terrorists.

From a business point of view the CSR initiative, which has been taken up with other US ICT companies has had the effect of:

1. Providing West Bank tech companies with the access to international work
2. Helping to develop both technical and managerial skills – the Israelis are a tough people to work with in business
3. Giving the ICT industry in West Bank confidence in their capabilities as well as giving the people confidence in their skills
4. Helping to put Palestine on the map as a potential outsourcing location, using the brands of these companies to help build credibility
5. Supporting the skill development of the employees and the education process

What it has not done is create rapid growth in the industry for all of the reason stated in this paper. A considerable barrier is the typical lack of understanding potential customers have of problematic developing countries as their perceptions are driven by what they see in the news.

But overall these projects provided West Bank ICT companies with an opportunity to prove their competence. This approach has helped to provide the branding and case studies which are establishing the West Bank as an ICT services provider location with other external customers. It has also helped build experience of working with international companies. The international companies also benefit from significant PR opportunities for their work in the region.

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[2] www.forbes.com/sites/richardbehar/2013/07/24/peace-through-profits-a-private-sector-detente-is-drawing-israelis-palestinians-closer

The early start-up CSR support has been less of a success. Our perception of the reasons relate to a partner organisation that did not really understand how start-ups work and need to grow, perhaps looking for the one big success rather than running with a lot of smaller ones where the chances of a success are greater; an environment where a start-up is difficult to make work due to the home market conditions, lack of access to external markets and a lack of experienced entrepreneurs who can provide the right advice and a financial system that makes it difficult to fund companies, relating to taxes, company formation and legal protection. We understand there are some new funds being put in place and these have overcome some of the issues the main current one being the Sadara Ventures fund of £30m to invest over the coming years. The fund has been created by a number of participants, including Cisco and Google, aid funds and US financial institutions and private individuals; a fund managed by experienced Palestinian and Israeli entreprneurs.[2]

The Cisco CSR also helped with training in the territory which seems to have been very well received and probably made a difference, though the economic results are difficult to measure in the short-term.

2.2 The Gazan ICT-sector and CSR

The position of Gaza is extremely complicated. A recent report estimates that 70% of Gaza's private industry has closed due to damage incurred during Israeli military operations (note: this was even before the hostilities in the summer of 2014), and the restricted movement of goods and materials. Twenty percent of Gaza's factories are operating at about 10% capacity; and 10% are operating at between 10% and 50% capacity. To meet the needs of the population in Gaza and to circumvent sanctions, a very large trade was established utilizing tunnels to transport supplies from Egypt to Gaza. The tunnels have greatly increased the type and amount of food and non-food items in Gaza (including ICT-related items), although tunnel goods are subject to price inflation and the policy of the leadership in Egypt (in summer 2014, they were still closed). An inadequate power supply also negatively affects the economy, and neighbourhoods in Gaza experience rolling blackouts and common power shortages - and booming markets in generators. Post the 2014 conflict these conditions have become far worse.

Unemployment in Gaza is roughly 32% (in 2013); refugee youth unemployment is 60%. Gaza scored very poorly in access to credit and starting a new business. There are approximately 45 ICT enterprises operating in Gaza currently, and that the total revenue of the ICT sector in Gaza is between $ 50 and $ 75 million per year (of which around $ 800.000 for export). In addition to these enterprises, there are a considerable number of entrepreneurial start-up enterprises, unemployed ICT professionals, and fresh graduates who are not counted in the sector per se, but must be included when discussing Gaza's ICT potential. A number of companies are export market-ready. Some have their own applications or products, and some of these enterprises have excess capacity and flexibility; that is, they have access to skilled contractors, providing a flexible workforce that can be scaled up to meet increased demand. Export potential is limited to enterprises that provide software applications, software services, applications development and other support services such as technical help lines and BPO services. Graphics and gaming services are also possible. One of the few 'advantages' of Gaza is the fact that the local salaries as lower than in the West Bank.

CSR success in Gaza is likely to take more time to develop and manage. Gazan enterprises could approach CSR companies in search of experience, and in the hope of future commercial partnerships earned through that experience. UNRWA (United Nations Relief and Works Agency for Palestine Refugees is currently initiating a CSR-related project. Its 'Gaza Gateway' will be a social enterprise in order to create local ICT-jobs (related to services in SAP software, and focussing on foreign clients).

2.3 Conclusion for CSR in Palestine

The experience in Palestine seems to point to a number of area where CSR has been very positive, but is unable to influence some factors for overall long-term success. These are captured in the table below.

Positive Factors of CSR	Factors Required to Make CSR More Beneficial
Help to build real, business-based contracts with external companies	Government support to develop the appropriate financial and legal frameworks for development
Actively build skills in Palestinian companies in both technology and management	The development of appropriate communication networks at a reasonable cost and band-width
Built relationships between two populations	Appropriate regulatory bodies such a Telecom
Helped to start to put Palestine on the Outsourcing map	Influence of the education content for engineers
Provided the opportunity for entrepreneurship and start-up development	Restrictions on travel hence the opportunity to sell internationally
Developing more confidence in the industry and highlighting its importance to the economy	The development of a strong and vibrant internal market for ICT application, both public and private sector.
Proving to the population that positive actions are happening	Formalisation of quality measures
Help to drive quality systems and introduce recognised work processes to Palestinian companies	
Provide training that would not normally be available in a normal commercial contract	
Help introduce the latest technologies in to the Territory	

Thus CSR has proved to be very important and beneficial and continues to be, but to make a real medium-term differences other criteria need to be addressed to help this sector reach its potential. There are challenges and not least the typical Aid based funding; projects have a fixed time scale and therefore finish often before the full benefits and the full lifecycle has been achieved.

3. Status of the Palestinian ICT-sector: a basis for outsourcing

In the field of ICT outsourcing services, there are eight principal factors which can explain ICT export success.[3] These eight factors make up the "Oval model", and labelled oval because of the shape of the national boundary depicted in the following:

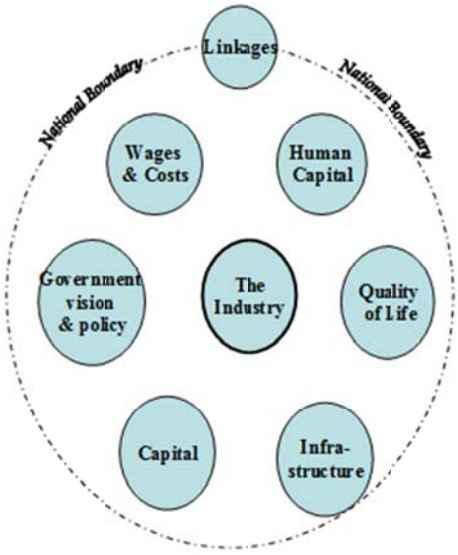

Figure 1: the Oval Model

3.1 Status of the industry

The ICT sector in Palestine started during the early 1980s with some hardware resellers who worked along with Israeli dealers of large hardware vendors. By mid 1980s, vendors started offering software solutions such as accounting and word processing. With the signing of the Oslo accord and the formation of the Palestinian Authority, demand for both hardware and software, especially from the government and NGO's, increased. As more and more people started working on computers, a growing number of providers started offering their products and services in the Palestinian markets

Although current data do not allow for an accurate assessment of the current economic size of the ICT sector in Palestine, the sector has seen huge growth in recent years, although available numbers vary. According to the Palestinian Central Bureau of Statistics (PCBS), the CAGR of the local ICT market is around 12,7% and was worth $593,2 million in 2011. In 2013 the sector contributed around 8% of the GDP of Palestine up from 0,8% in 2008 (a phenomenal 68% CAGR). Estimates of ICT exports were thought to account for around $20 – 50 million in 2013. However it must be noted that the vast majority of the total value is related to internal telecommunication and networking revenues, principally from Paltel, the incumbent internal telecommunications provider.

Due to their physical separation and different political challenges, the West Bank and Gaza can be viewed as distinct markets; the West Bank's ICT sector is larger and more developed than that of Gaza. An estimated 225 ICT companies operate in the West Bank; in Gaza around 45.

The Palestinian ICT sector holds great potential for growth and is considered a potentially large employer and contributor to Palestinian economic development. At present the ICT sector's

[3] The Oval Model is taken from: Offshoring Information Technology - Sourcing and Outsourcing to a Global Workforce" (Cambridge University Press, Erran Carmel and Paul Tjia, 2009)

contribution to the overall output of the Palestinian economy is disproportional to the number of people: in the West Bank in 2013, it employs 3% of the workforce (about 5000 individuals), producing 8% of output.

The ICT sector is one of the fastest growing Palestinian economic sectors, and despite the relatively small size of the industry, ICT is important within the Palestinian economy. The output value of a Palestinian worker in ICT is an estimated at $40.000, against an average of $17.000. It is also estimated that the multiplier ratio is about 1 to 3, meaning that one new ICT job creates up to three other jobs in other sectors.

The ICT industry in Palestine has multiple stakeholders that are involved in various ways in nurturing and building the sector, including:

- Government: Ministry of National Economy (MONE), Ministry of Telecommunications and Information Technology (MTIT)
- Private sector: ICT companies, training companies, consultancy firms
- Associations: PITA (Palestinian Information Technology Association of companies) , PalTrade(Palestinian Trading Center), FPCCIA (Federation of Palestinian Chambers of Commerce, Industry and Agriculture)
- Donor agencies: GIZ, Oxfam, Mercy Corps, AFD, CBI, DFiD etc.
- Academia: universities and community colleges.

As a proportion of the overall ICT output, the telecommunications subsector represents the largest share of the ICT sector. In addition, there are an estimated 270 ICT companies present in Palestine covering all sectors of the ICT market, mainly focussed on the internal market. Led by heavy public sector subsidy, coupled with the relative isolation of the West Bank and Gaza from international trade opportunities, means that many of these companies are not accustomed to international competition and find it difficult to keep-up with international technology developments. For example, out of the 45 companies in Gaza, only eight are involved in some exporting, mainly to Gulf countries and with a total value of around $ 800.000.

The Palestinian Information Technology Association represents around 143 ICT companies. These members are involved in a wide range of ICT sectors. The majority of firms are small with an average of 11-25 employees.

However it should be noted that, due to lack of available investment monies, the willingness of local companies and restricted access to technology (i.e. 3G Networks) the local market remains technologically under developed.

There has been some effort by PITA to build firms' capacities and business skills using donor funding, with the absence of government financial support. A workshop to study main challenges facing the software industry in Palestine was organized by PITA on January 12, 2012 and came to conclude the following challenges: skill development to keep up with international trends, transfer new knowledge to the developers (software and web designers), new tools for web and software development that they are not aware of, international Quality Certification for software development, need for a reference code or organization that sets a minimum required quality in the software and web development business, university curricula that are not compatible with market needs and need to be upgraded. To some extent the CSR monies are helping to address some of these challenges

A major downside is the fact that the Palestine ICT sector is dotted with small firms. The largest company in outsourcing has less than 150 employees whereas the biggest company in packaged

product has less than 50. In consequence, they can only operate in and meet the needs of niche markets. Only a few companies are entirely or predominantly reliant on international clients (such as ASAL Technologies and EXALT).

There is work going on, using donor funding and Middle Eastern investment to develop start-ups in the sector in both Wet Bank and Gaza. These are focussed around new IT graduates and many of the projects are in the mobile space with the development of Apps.

Numerically, if we exclude the major telecom provider Paltel, the Palestinian ICT sector is not very large but past surveys suggest that wide set of capabilities exist in the industry. Some examples of products and services offered by Palestinian companies in the ICT domain (of which many can be delivered remotely to foreign clients):

Services (as an outsourcing provider):

- Applications development;
- Mobile applications development;
- Web development;
- Software design and testing
- Electronics development, mainly circuitry-type services.

Business Process Outsourcing (BPO) consists of a diverse range of activities, where an ICT infrastructure is an important tool and enabler to perform this work for clients abroad, including, for example; Contact Centre, Back Office Process, Data Conversion, Multimedia Services and Graphic design.

BPO also provides an opportunity for Palestine, but should be restricted to specialised, lower volume, specialist services due to scale. For example, Arabic call centres would be a good example of possible BPO for the region (the neutrality of the Palestinian Arabic accent is notably an advantage in the business of call centres), or outsourcing of specialised legal or human resource services to Middle Eastern companies. There are examples of some of these already with call centres (e.g. Transcend and Reach). Gaza has some 2D and 3D animation, where international services are being delivered.

Specialisation in a few value-add areas of BPO would make it easier for Palestinian companies to build an international reputation and scale, for example multilingual telemarketing activities targeting Arab customers or data-entry in Arab language (as already done for a Dutch company). Additionally, encouraging companies to co-operate and run joint projects will help deliver scale to prospective customers.

3.2 Government vision and policy

Gaps in the legal regulatory framework include absence of intellectual property law. Palestine has no Intellectual Property Rights (IPR) laws and regulations and no structure to enforce IPR protection, and this has a limiting effect on the country's attractiveness for foreign direct investors and some outsourcers. Patent protection exists in theory, but not in practice, based on laws from 1947 and 1953. The same applies to the protection of copyrights and related rights. Comprehensive new drafts exist and have been introduced into the legislative process. However, in the absence of the normal legislator (the Legislative Council, currently suspended) both have been held up.

The Palestinian Telecommunications Regulatory Authority (PTRA) was established in 2009 but has not been brought into practice yet. Hence, the Ministry of Telecom and Information Technology

(MTIT)[4] is also playing the role of the industry regulator as well. This leads to ministry being over pressed for resources to improve the ICT infrastructure in the Palestinian territories along with dealing with pricing, licensing and operational issues of the telecom sector. The lack of regulation or no clear regulation creates a negative environment for investment and thus affects the medium and long term growth prospects of ICT Industry. This situation is exacerbated by the technology restrictions imposed by Israel.

In recent years there have been many efforts by the Ministry of Telecommunications and Information Technology (MTIT) to increase competition in the telecom market including liberalization efforts, building the government network, and the Academic Network. This resulted in improved competition including the introduction of more Internet service providers to the local market, though they are all using the Paltel network. It is worth noting that the Palestinian government does not own any shares in the private telecom companies.

The Ministry also issued the 'National Strategy for Telecommunications, Information Technology and Post in Palestine, 2011-2013'[5]. As the guiding strategy for the public institutions working with the ICT sector, this document identifies the Palestinian Authority's vision for this sector and gives an overview of the current state and the challenges facing this sector. The primary focus of the information technology sector policy is building the e-government capability of the PA as well as developing laws and regulations that will create a hospitable ICT environment.

Another challenge is the limited ability of the government to support education, research and development (R&D) in ICT. Government efforts are needed to support improved curricula, student training opportunities, etc. Additionally, the financial and human resources dedicated to R&D by the government and the private sector in Palestine is minimal. As a result, there are very few ICT innovations, and even fewer cases of R&D innovations being brought to market as products or services.

Despite the efforts of the Palestinian Investment Promotions Agency (PIPA)[6] the country's risk level is rated high by investors. That combined with its inability to freely provide residence visas and access to potential investors greatly hinder the flow of Direct Foreign Investment into the country. The World Bank rates the West Bank and Gaza 131 out of 183 countries for "ease of doing business". Also the process of registering a company is neither simple nor economical for technology start-up entrepreneurs.

The ICT sector has received limited financial assistance and regulatory and fiscal policy support from the government since 2006. Among the weaknesses of the ICT sector in Palestine is a lack of capacity of the MTIT to influence the evolution of the sector as well as the low level of commitment to ICT initiatives by most ministries. The Ministry of National Economy is currently in the process of developing a trade in services policy and envisages building a more comprehensive trade policy in the near future.

3.3 Human capital

Compared with other Middle East and North Africa (MENA) countries, Palestine has a well-educated population with a very high literacy rate and proficient language skills. As an ICT industry is a knowledge driven industry, education plays a vital role in the growth and sustainability of the industry. The Palestinian government, through International Aid, has invested in education, both technical and in languages. ICT-related courses command high interest among the students. There

[4] www.mtit.pna.ps
[5] www.pmtit.ps/ar/cp/plugins/spaw/uploads/files/Trans_National_Strategy_ICT-Post_Palestine2011-2013.pdf
[6] www.pipa.gov.ps/

are 13 accredited universities teaching ICT and delivering some 1500 - 2200 new ICT graduates to the market each year. This is more than the current market requires, resulting in both unemployment and a brain drain for the best candidates, but providing the potential for growth.

Soft skills available in Palestine include good language skills in Arabic, English and Hebrew that facilitate communication with customers. English is the language of instruction in major science based courses and Arabic & Hebrew are the language of the land. The majority of managers and developers speak English. There is also cultural proximity to Western Europe, Middle East and North America: this potentially reduces management costs for customers. Cultural understanding is an advantage that some other, better known outsourcing regions (for example India) do not always deliver. Additionally, many of the senior managers and business owners have experience outside of Palestine, many in the USA, bringing important skills to their companies. As the industry grows, more home grown managers will be required and already there is a shortage of good middle managers.

The challenge before the industry is to utilise the available skills and take it to the next level. However, for the Palestinian ICT sector to grow these skills need to be updated as per the current market requirements. Companies often need to train fresh graduates in order to make them job ready. It is essential that the education institutions play a key role in achieving this goal and thus helping increase the skill set availability in the Palestinian Territories. It has also been noticed:

- There is a gap between the fresh graduates' skill level and practical hands-on experience needed in the job market (although this is the case in many developed countries as well).
- When it comes to domain expertise many companies are focusing on "commodity" types of market segments and there is a lack of specialization needed in the market (e.g. in niche areas).

3.4 Wages

Compared with Western Europe, and based on comparative charge-out rates, the Palestinian companies offer a beneficial cost structure and with the technical expertise also good value for money. This makes Palestine attractive to potential partners outside of the region, and especially in Western Europe. A typical senior software engineer in Palestine is charged out at between $80 - 300 per day, with an average of $172, according to research. Using published data, the following cost comparisons can be made:

Country	Average Cost per day	Day Range
Palestine	$172	$80 - $300
Israel	$750	$600 - $1000
Jordan	$167	$80 - $350
India	$300	$210 - $420
China	$180	$100 - $200
USA	$850	$700 - $1000
South Africa	$450	$250 - $600
Ukraine	$230	$125 - $280
Poland	$260	$170 - $390

Table 1: International Wage Comparisons 2010[7]

Palestine's ICT sector has a higher cost structure compared to its main local competitor Jordan, especially related to labor cost. Palestine cannot compete on a cost-basis with other outsourcing

[7] source: AFD, plan for the support for the Information and Communication Technologies sector in Gaza (2010)

locations such as Egypt, Bangladesh, Sri Lanka or Vietnam, where day rates of around $80 can be found. This implies that Palestine cannot adapt to be a price leader. Note: this is especially related to the West Bank; the services from Gaza can be offered at a much lower rate.

The lower cost base compered to Western Europe is nevertheless one of the major strengths that must be highlighted in order to position Palestine internationally. However, cost alone will not ensure the development of the Palestinian ICT outsourcing industry; value for money is the overall requirement, which means that the expertise and quality issues have to support the low cost base.

3.5 Capital

Potential sources of finance include: government programs, the banking sector (currently the largest and most important source of formal finance, though least accessible by SMEs in the IT sector), capital markets, venture capital (e.g. Sadara Ventures[8], Fast Forward[9], Abraj, Siraj, Sharakat and Arabreneur fund[10]), trade financing and informal sector financing (loans from family and friends).

There is insufficient provision of domestic credit for Palestinian ICT firms. SME's and start-ups particularly face challenges in accessing early stage funding. This is a major obstacle to doing business. In case venture capital is available, however, companies have not reached the readiness and maturity levels necessary to qualify or make their case to those funds. There is also concern about the availability of working capital as Palestinian companies seek to grow.

Palestine has so far not been very successful in attracting FDI in the IT sector. Attracting multinationals and foreign direct investments to invest in Palestine has proven rather difficult, and remains a challenge. In order to assist start-up companies, PITA established in 2004 the Palestine Information and Communications Technology Incubator (PICTI)[11] as an independent organization, though this has yet to help deliver any significant companies.

3.6 Technological infrastructure

The privatization of the telecom sector led to the formation of Palestine Telecommunication Company (Paltel). It had an exclusive license to provide internet and communication services in the Palestinian territories, however a second mobile services company has been given license to operate as well (Wataniya Mobile). Advanced and accessible basic telecom infrastructure including fixed and mobile phone lines, Internet and broadband services is available and unsurprisingly is the most used aspect of ICT, driven by consumers. As a proportion of the overall ICT output, the telecommunications subsector is, by far, the largest in the ICT sector.

Market liberalization is important given its impact on increased competition. Improved competition included the introduction of more service providers to the local market. However, the incumbent operator's (Paltel) de facto monopoly is still impeding more effective competition. This is resulting in high connectivity costs and issues with the network quality of service, low speeds, and connectivity reliability.

The telecom network in Palestinian territories is owned and operated by Palestinian operators, but to comply with the Oslo accord, the connection to the outer world has to happen through Israeli telecommunication operators. Paltel owns and operates the internet network, but it must buy its bandwidth from Israeli telecommunication operators, and then resell this capacity to its Palestinian customers (both to ISPs and end consumers), which results in expensive connectivity costs. Another

[8] www.sadaravc.com
[9] www.fastforward.ps
[10] www.arabreneur.com
[11] www.picti.ps

major issue is the restrictions put in by Israeli Authorities on importing telecommunication equipment by Palestinian telecom providers and ISPs. This also puts additional pressure on assimilation of internet and increasing of bandwidth within Palestinian Territories.

Apart from this, Palestinian mobile services companies, both Jawwal (a subsidiary of Paltel) and Wataniya are choked for bandwidth by Israeli authorities. This is evident as Wataniya, which has license to operate both 2G and 3G services, is only operating 2G services; currently Israel is blocking the creation of the 3G network. This loss of business for Palestinian service providers is exacerbated by Israeli service providers, who have license to run 3G services outside the Palestinian territory, but coverage includes most of the West Bank and Gaza. In the former due to the prevalence of settlements and in the latter due to the small land area. The 3G services serves the need of the consumer for faster mobile internet in the territories. This lack of faster internet creates a problem for the software industry which completely depends on the ICT infrastructure.

The main change that policy makers should try to effect is to push on the political level to give Palestinians access to 3G and 4G networks and larger high speed internet bandwidth. These capabilities are critical for the development of a competitive Palestinian ICT sector. As long as this necessary infrastructure is not available, the Palestinian ICT sector will continue to be at a disadvantage in terms of international and regional competitiveness.

In general, the current state of ICT infrastructure generally does not pose a major impediment to the industry but could be improved. The costs of connectivity and more generally electricity, however, are problematic. The quality of the connectivity is an issue as well as the fact that there is no control of the gateway. Finally, the connectivity is uneven across the country. Major cities are well connected compared to rural areas. Even during the worst conflict situations, there was never damage to Internet connectivity, both in Westbank and in Gaza. IT companies in Gaza, for example, usually continued to serve clients in various countries throughout Israeli bombing campaigns, keeping up service and delivery standards. In fact, while some economic sectors have suffered over the past years because of Israeli impediments on physical exports, most segments of the ICT sector have continued to thrive.

3.7 Linkages

Linkages emerge between individuals, between companies, and between nations due to geographical, cultural, linguistic, historical or ethnic connections. The effective use of linkages is one of the most important success factors for developing an ICT-export industry (for example in India, with an active role of the Indian diaspora in the United States).

Over half of the Palestinians live outside the Palestinian territories, including 4,9 million Palestinians living in the Middle East. The Palestinian diaspora is broad, geographically and in terms of their experience. Approximately 1,3 million Palestinians live in Jordan, while Lebanon, Syria and the Gulf States also host large communities. North and South America and Europe are also home to sizeable Palestinian communities.

This diaspora community represents a natural channel for Palestine's marketing and support. Various Palestinian companies have shown export success that is mainly due to the owners personal relations with the outsourcing market, especially with the US. Since sales channels are currently limited, the successful firms often have management with good connections rather than formal sales strategies.

Nevertheless, the actual activities related to mobilizing the diaspora are still limited. It must be noted that PITA has developed its strategic plan with the intention of tapping into the knowledge

and available opportunities that the Palestinian diaspora possesses in the international community. In 2013, it initiated the Palestinian Global IT Network (GloPal)[12], which will provide linkages and opportunities for Palestinian companies, entrepreneurs, and IT professionals to develop and link with opportunities outside the boundaries of Palestine and the region. The concept is based around engaging skilled members Palestine's friends and diaspora and tapping into their resources, knowledge, and contacts. Objectives:

- Professional Advice on programs drafted under the strategy
- Act as ambassadors and representatives to Palestine's IT industry
- Creating linkages between Palestinian IT businesses and professionals and the rest of the world
- Be part of Palestine's IT industry branding initiative
- Knowledge & skills sharing
- Assisting entrepreneurs to build successful start-ups
- Mentoring and coaching of Palestinian IT businesses and entrepreneurs.

Strategic communication and collaboration with, and involvement as clients, investors or brokers of, the Palestinian Diaspora in target markets can enable and significantly stabilize the said trust-based relationships need for successful marketing of ICT services, including and beyond outsourcing.

This is a potential source of finding further CSR support, particularly if this can be related to actual business projects, overseas training and technology investments.

3.8 Quality of Life

The quality of life in a location helps attract foreign clients. Ramallah can be considered a relatively attractive city, and has been extensively developed in the last 10 years, being the commercial and Government centre of the West Bank, as well as hosting a large community of international aid-workers along with its close proximity to Jerusalem. It does not yet attract a serious number of European business persons, living and working in the city. In the background, there are always security-related issues and uncomfortable crossing of the "wall", which make Palestine a less attractive location.

In addition, office space in Ramallah in particular is often hardly affordable for start-ups and small ICT businesses. In practice this operates as a significant obstacle to doing business, especially in the early stages of companies' development.

4. What companies should do themselves

CSR has positive impacts, but there are areas it does not help with and therefore the responsibility to benefit in the longer term comes back to the individual companies, if possible with local industry and government support. The Palestinian companies should especially promote their strengths more actively abroad. Palestine is not only an interesting and upcoming outsourcing destination, compared with other nations, it has another specific advantage: it is also a gateway to the Gulf region for European producers of software packages. Countries such as Saudi-Arabia or the Emirates are potential export markets and the Palestinians can be used for localisation (e.g. translating the software into the Arabic language). They can also assist in market research and marketing and sales, since they already belong to networks in the region.

[12] www.pita.ps/content/glopal-palestine-global-it-network

SWOT analysis

Strengths	Weaknesses
ICT capabilities: a wide range of existing software skills; a number of companies have demonstrated capabilities by exporting to international markets, including Europe **Lower cost base**: lower labour costs in comparison to Western-Europe. Also: low employee turnover Language proficiency: English plus Arabic (and Hebrew) **A 'nearshore' destination**: Palestine has geographical and cultural proximity with Western Europe. Also no time differences. **Active support**: there are existing trade support institutions, such as PITA	**Workforce**: gap between fresh graduates and job market; limited numbers of project managers and team leaders **Issues of size**: a small domestic market with minimal government IT spending. Lack of scale in most firms; no access to capital **Access to export markets**: limited access to external markets for most ICT firms. No end-to-end regional and international market penetration programs (B2B) **Branding**: limited visibility as an IT country. Negative image because of political situation
Opportunities	**Threats**
Export markets: existing and potential markets for IT/BPO outsourcing. Nearshore competitors are becoming more expensive. **Arabization**: unique support to European product software companies **Partnerships**: with larger organisations (e.g. Cisco, HP); CSR approach **Global financial crisis**: a growing interest in Europe for lower cost ITO/BPO services **Development partners' interest**: export-supporting activities by various donors (e.g. USAID, GIZ, CBI) **Palestinian diaspora**: ccapitalise on the diaspora who work in ICT-sector abroad	**Unrest**: no improvements in political situation between Israel and Palestine. Deteriorating political situation in the Middle-East **Recession**: there is pressure on budgets, leaving fewer opportunities in a shrinking market (e.g. in US, Europe) Political change of focus: There is evidence to suggest that the political focus of the West is moving and funding is being re-allocated **Competition**: much competition, both from 'nearshore' countries and 'farshore' destinations

Table 2: SWOT analysis ITO & BPO sector in Palestine

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Additional information on offshore sourcing

Paul Tjia, together with Erran Carmel (American University, USA), wrote: "Offshoring Information Technology - Sourcing and Outsourcing to a Global Workforce". Published by Cambridge University Press, the book (fifth print) is available at Amazon: http://www.amzn.to/xegoU9