Business Agenda for the Pakistan
IT & ITES Sector 2009

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Preface

With its extensive international experience in facilitating private sector reforms, CIPE believes that a national or sector specific business agenda can be a vital tool for the business community to encourage investment and stimulate business activity and economic growth.

Developing an agenda mobilizes the business community to use its skills to effect public policy reform by setting legislative and regulatory priorities and clearly communicating them to policymakers. The process also develop consensus between educates members of the private sector on public policies that affect their business.

Center for International Private Enterprise has assisted Pakistan Software Houses Association in developing this sectoral business agenda that identify laws and regulations that hinder business activity. It also offers concrete recommendations and reforms to remove these barriers and improve the business climate. It is commendable that under the able leadership of Ms Jehan Ara, President P@SHA, IT & ITES sector representatives were able to come together at a platform to present their concerns to government officials in a unified voice that will increase the likelihood that the agenda will be adopted.

Moin M Fudda
Country Director
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Acknowledgements

The Pakistan Software Houses Association for IT and ITES (P@SHA), with support from CIPE (Center for International Private Enterprise) has undertaken the preparation of a formal Sectoral Business Agenda (SBA), a document that will be a vital tool for the IT & ITES business community to encourage investment and stimulate competitiveness and economic growth. It is envisioned that the development of a focused reform agenda will assist the government in setting legislative and regulatory priorities and effectively implementing them. The SBA has endeavored to highlight key reform areas and to offer concrete recommendations for removing these barriers in order to make this critical sector internationally competitive. Developing the Sectoral Business Agenda has been an inclusive activity involving many private sector members. The efforts and contributions of the following working group members must also be acknowledged and recognized.

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Executive Summary

With gross annual revenues in excess of US$ 1 billion, and growth crossing 50% per annum, Pakistan's IT business sector is clearly beginning to make an impact. However, the rapid change that characterizes the technology and its business impact means that policies need review and improvement, if growth is to continue at a favorable rate and the impact of technology businesses within the country is to be sustainably supported through the formal sector.

The Pakistan IT industry, led by members of the Pakistan Software Houses Association for IT and IT Enabled Services, has compiled a set of recommendations designed to reform policies affecting the IT sector. These recommendations are listed in four major sections, namely **Legislation**, **Finance**, **Human Resource**, and **Infrastructure**. The industry envisions that the country is well placed to take full advantage of the cumulative impact of sectoral changes as recommended here. Pakistan will be in a strong position to emulate other leading Asian nations in establishing a firm base to play a continuing role in the creation of wealth, through building applications and services of both local and global relevance.

To a large extent, modifications to the **legislative** climate will go a long way in supporting other changes necessary to leverage the full potential of this business sector. For this reason, it has been given priority. The other recommendations, many of which have an impact beyond the IT sector, take on an urgency given the rapid rate with which the IT and ITES business sector is growing worldwide and its potential impact across all aspects of society.

> → One key aspect to the entire subject of framework reform is open dialogue between all stakeholders. The industry recommends setting up joint committees to draft out new Acts, with modifications / amendments to existing Acts as far as possible. These committees will set standards in terms of response time and action in terms of short-term ordinances, both as enabling rules as well as providing a test-bed for refining legislation to affirm them. Such laws will also be created through time-bound processes.

On the **finance** front, opportunities for and encouragement to small investors from abroad must be supported, repealing current rules that favor large fund commitments only. Customs and duty drawbacks for import of hardware for repairs and re-export should be streamlined, primarily through the provision of exemptions for specialized industries. On issues of finance, recommendations aimed to improve small companies' access to funds, so as to retain highly qualified technical people. Specific pointers to meeting long and medium term capital growth needs have been enumerated.

> → Mutual funds focused on this sector should be created, including a specific industry association investment fund. Importantly, the summary recommendation is for regular surveys and studies to be conducted in order to measure the effectiveness of public policy and for amendments and enabling to be structured to provide support where perceived.

The lack of authoritative studies on the status of **human resources** needed by the industry, which already competes favorably against other quality sectors such as banking and financial services, hampers quantifying the gap demand. However, supplementary recommendations are made to address the immediate needs, as well as to keep skill levels across the industry on an upward path.

On the general **infrastructure** front, the need for properly managed office space is highlighted. The problem of insufficient power generation is common across all industries, but the leverage of power consumption to earnings is much higher in the case of IT, which can be given special consideration through special zoned infrastructure, such as IT parks.

- → Improving network connectivity and liberalizing cutting edge technologies like Voice Over IP are strategies that need to be examined to avoid stifling growth. The positive examples of other Asian IT giants, who belie their physical size, such as S. Korea and Taiwan, are instructive.

Finally, the report details recommendations on specific steps to take in order to manage professionally the creation and sustenance of a positive brand image of Pakistan as an IT destination.

Introduction

The IT and IT enabled services (ITeS) marketplace offers incredible opportunity to developing countries to leapfrog into the ranks of the developed world. For example, during 2004, Indian companies exported over US $ 19 billion in the form of IT and ITeS, accounting for nearly 9% of the global trade. This is expected to grow to about US $ 56 Billion within the next few years.

Other countries have also demonstrated that the Indian phenomenon is not an isolated one. Russia and other Eastern European countries, as well as the Philippines and Costa Rica, have shown promise in terms of export potential. The scale and pace of this growth is unimaginable in any other industry, and a number of other developing countries are attempting to emulate the Indian success story.

Pakistan unfortunately has not lived up to its full potential, even though export revenues are now in the region of US$1 billion per annum and growth over the past four years has consistently exceeded 50% year on year. There have been good success stories, but scalability remains a major issue. The government has assisted by providing subsidies in the area of ISO and CMMI Certification, as well as declaring some buildings as Software Technology Parks and providing a tax holiday on exports until 2016. There is also an internship program that has been in existence for a few years. However, a holistic view of the situation needs to be taken and short term, medium term, and long term measures need to be defined that will boost the IT and IT Enabled Sector.

There is an urgent requirement to take stock of the current situation, analyze what the issues are that are hampering Pakistan in its efforts to grow the IT sector, and make recommendations on the way forward. Very importantly, this sector, different from other important parts of the economy, is not simply an independent activity providing relatively high per capita income, but is also an enabler to all other sectors of the economy.

It is an established fact that a healthy IT sector is synonymous with the efficient operation of business, agriculture and governance, including the gamut of social services, education and development. As such, development of this sector will have specific long term impacts on the National Economy both directly and indirectly.

Key areas of reform, the associated challenges, and proposed solutions in connection with ICT and ICT enabled businesses and users are highlighted in the following sections.

Legislation

Legislation Background

In order to set priorities for a concerted effort to create a positive legal environment for the promotion of healthy business practices, we must put the current situation in perspective. With the global economy in flux, industry recognizes the need to prudently manage the flows of foreign inward remittances and foreign investments. Having said this, industry also recognizes the pre-eminent position this technology plays as a leveraging force for the rest of society, quite unlike other business sectors. This has strongly been recognized in the recent past, through such actions as the promulgation of the Electronic Transaction Ordinance [2002]. Considered to be a landmark, it focused on enabling rather than regulating. However, it has not been followed up by suitably enabling formal legislation. In fact, it has become one of a series of ordinances unsupported by national consensus in the form of legislative affirmation, in some cases dubious in their constitutional validity or suitability (due to poor drafting) to achieve the claimed objectives.

For this reason, the situation demands an environment where industry-led policy advocacy is used as a basis for policy formation and legislation focused on enablement and facilitation and not discretionary/arbitrary regulation. Particularly, regulation criteria remain undefined, uncertain, and contrary to international best practice. Such an approach will promote sustainable domestic and foreign investment and healthy economic growth within the industry. New regulation should seek to support and create new opportunities for both domestic and export-oriented local industry in ways that can leverage the growing, nation-wide IT framework. Towards this objective, this paper identifies core areas where enabling legislation is needed.

Key Challenges in Legislation

The E-Crime Ordinance and the Data Protection Act are immediate areas of concern and need to be addressed ad hoc, while a coordinated program of civil societal improvement in the legal environment for a healthy IT

enabled nation is simultaneously under development. Many software and service companies, banks, telecom companies, FMCGs, and government agencies are unaware of existing policies and legislation. We need a concerted effort to create awareness.

It is important that all stakeholders be taken into confidence and made part of the policy formation and apparatus. This would include individuals in civil society, individual consumers of IT services, businesses, government agencies and departments, producers of IT services and software, and others. Also, the input received from stakeholders should be seen to impact legislation; otherwise, the motivation and incentive of stakeholders to take part even in consultations will diminish, which will adversely impact the partnership of regulators and business in policymaking.

Who will take the lead?

P@SHA will lead this initiative by bringing stakeholders to roundtables on the E-Crime Ordinance and the Data Protection Act. MoITT, PTA, and FIA will be also be engaged in this advocacy initiative.

P@SHA will procure a legal expert to redraft the E-Crime Ordinance so that it is acceptable to all parties and is in line with legislation that is considered to be best practice around the world. The Data Protection Act RFP is already with the MoITT. Once drafted and accepted by the private sector stakeholders, it will be sent to the Ministry of Law and the Cabinet for approval. P@SHA will seek funding from donors to support these initiatives.

The process for reforming each of the laws would be:
1. Roundtables will be organized jointly by P@SHA and other interested groups
2. Legislation will be drafted by a legal expert
3. The draft circulates to a committee of stakeholders from the roundtable for comment
4. Draft legislation is sent to MoITT with recommendation to send it on to the Ministry of Law and the Cabinet
5. Continued follow-up with relevant ministries and the Cabinet

Objective
To create an enabling and growth oriented legislative framework.

Recommendations

Copyright Regulations
- Amend the Patents Ordinance 2000 to allow software registration.
- Amend the Registered Designs Ordinance 2000to provide for the registration of digital designs not necessarily connected to industrial applications.
- Amend the technically and legally incorrect definitions of the term "computer program" in the Copyright Ordinance 1962.
- Amend the Copyright Ordinance 1962 to provide for protection as available under the WIPO treaties and additional provisions as provided under the US Digital Millennium Copyright Act 1998.

Next Steps:

Commission a legal expert to put together the required amendments
Have a multi stakeholder meeting at which the legal expert should present the suggested amendments
Refine the proposed amendments in line with stakeholder input
Post online for comments
Send recommendations to the MoITT and all relevant government departments

Relevant Authorities:

- Ministry of Commerce
- Ministry of IT

Impact:

The need for Pakistan to invest in its creativity, harness its intellectual capital and protect its innovation in the 21st century's innovation economy is so important that it directly equates toour strategic national interest. The 21st century is all about innovation, and innovation, in this century, will largely be based upon and stem from the digital environment and ICT. Hence, the ability of Pakistan's regulatory environment to recognise and enforce intellectual property rights in the digital environment are of vital strategic

importance in protecting the national security interests of Pakistan. IPR protection of digital rights is vital for not just FDI, but also for Pakistani businesses and for the protection and security of the intellectual capital and innovation of Pakistan's dynamic youth, researchers, and entrepreneurs. If our IT programmers, data processors, and researchers cannot secure their innovations, source codes, and programs by getting them protected through copyright as well as patents, measures that are available to their competitors in other jurisdictions across the world, their motivation for innovating will be crushed. This will not be an individual loss or a loss to a business, but rather a loss to the competitive edge of our economy and, hence, to the national interest.

The reforms mentioned above will ensure that the innovation in IT in Pakistan, which is a key driver for present and future economic development of Pakistan, is protected and secured.

Data Protection, Privacy, and Confidentiality

- Promulgation of Confidentiality Law.
- Promulgation of Privacy Law.
- Promulgation of the Data Protection Act

Next Steps:

Multi-stakeholder meetings will be organized by P@SHA to determine the need for these three pieces of legislation and the overall scope of the legislation to be drafted
A legal expert will draft these pieces of legislation
The draft will be circulated widely
Feedback will be incorporated after a consensus is reached
Drafts will be sent to the MoITT with a recommendation that they be Promulgated after due process

Relevant Authorities:

- FIA
- N3RC
- MoITT

<u>Impact:</u>

There are several concerns regarding information and data outsourcing, particularly those expressed by companies operating in the European Union.EU companies face stringent legal requirements with regard to providing protection and security to data outsourced for processing to countries outside the EU. Pakistani companies face severe competition when up against companies that operate in countries with legal regimes more suited to EU standards than Pakistan's. Additionally, business is cognizant of the marked differences between the requirements of the EU and those of the US in privacy law and data protection. The EU is a growing market for our companies and the US is a key existing market - both are important for Pakistani IT and IT-enabled trade. The adopted approach must not adversely affect the opportunities for Pakistani businesses to export their services to either jurisdiction.

By adoption of these measures, the Pakistani IT and IT-enabled businesses would be able to improve their legal coverage to export their services and enter into relationships for EU outsourcing of personal data to Pakistan. These new measures will assist Pakistani companies in adopting international best practices and demonstrate the contribution of the Pakistani public sector to growing the economy.

Cyber Crimes and VOIP

- Amend PECO 2009 to be consistent with the Budapest Cyber Crime Convention, additional built-in safeguards to protect the rights of individuals (these rights are covered by human rights and privacy legislation in more developed countries).
- Introduce Cyber Crime Legislation consistent in all aspects with the Budapest Cyber Crime Convention, with some additional safeguards built in to make up for the absence of human rights, freedom of expression, data protection, and privacy legislation in existing Pakistani law.
- Re-draft the legislation to ensure that definitions are in line with international practice and business and individual rights are protected.

Next steps:

A legal IT policy specialist will review existing legislation and redefine all terms and redraft all sections.

The draft will be circulated to stakeholders for feedback.

The draft will be sent to MoITT and legislators who have been actively advocating against this Ordinance.

VoIP needs to be free to use. The advantages are many. A paper will have to be drafted to enumerate the advantages of freeing up VoIP in order for Pakistan to become a high-tech cutting edge destination. The European Union example of deregulation of VoIP can be cited.

Once this paper is drafted, it needs to be sent to MoITT and PTA with recommendations.

Relevant Authorities:

- Ministry of IT
- Ministry of Interior
- FIA

Impact:

The current legislation, rather than preventing cyber crimes, offers significant loopholes, facilitates cyber criminal and cyber terrorist safe havens, and fails to provide domestic and international businesses as well as Pakistani citizens with protection against the real cyber criminal and cyber crimes. The bill also makes international cooperation difficult, which will adversely affect Pakistan's fight against terrorism and its stated objective of curtailing cyber crime.

The PECO and its provisions negatively impact investment in information technology and in the economy in general since it creates an insecure environment for business and users. Pakistan's reputation as isolationist and insecure will reduce its attractiveness for outsourcing and FDI, and make other competitive markets more enticing for such business opportunities.

Human Resource

Human Resource Background

The continuous availability of high quality human resources is vital for the growth and operations of the IT and ITES services industry. However, over the years, the growth in business and work demand has unfortunately met with a declining supply of human resources, particularly employees that have skills and knowledge in line with industry needs. This problem, in general, is difficult to solve due to the rapid growth and changes taking place in the IT field and is being faced by the majority of the nations of the world.

Due to an inadequate educational system, it is even more difficult for Pakistan to solve this problem. The situation is further compounded as a large number of resources are leaving the country. The demand for HR in the IT industry is at an all time high in UAE, KSA, Kuwait, and other countries in our region, while Australia, Canada, the EU, and the US have always been lands of opportunities for our people and are still attracting them.

Another factor affecting the availability of IT resources is that potential employees are being attracted by the lucrative packages being offered in the booming banking and telecom sectors. With demand outstripping supply by a large margin, salaries and attrition rates are rising. The net effect of all of the above is that IT and ITES services companies can't grow as fast as the market demands; their cost of operations is continuously on the rise; and the operations are difficult to sustain due to high attrition rates.

Several measures have been taken by HEC, PSEB, and the National ICT R&D Fund to accelerate the growth in numbers of qualified graduates to take advantage of the potential in this sector, together with its allied and peripheral

Key Challenges in Human Resource

Key challenges can be divided up into two types: a) challenges due to the general characteristics of IT jobs, and b) employer needs and challenges

that are specific to Pakistan and other developing nations.

There are currently no credible studies available that establish the supply versus demand situation in terms of the number, required knowledge, and skills of IT-related resources. P@SHA and PSEB have led small studies to assess the IT industry, collecting some data on HR needs and trends. However, more data is needed to make informed decisions.

The infrequent studies combined with the widely accepted wisdom of industry executives indicate that the demand for quality resources (those with skills and knowledge aligned with industry needs) is much higher than the supply. However, no one has an idea as to how big this gap is and how this is going to affect the future of IT in Pakistan. It is also not clear if the gap is due only to low quality candidates or if broader issues beyond quality remain. This clearly points out to the need for credible studies on a regular basis.

Challenges Due to General Characteristics of IT Jobs and Employer Needs:

- Due to rapid growth and changes in the IT field based on technological advances, needed skills change quickly.
- Jobs in the IT field are varied, complex, and specialized, as are the knowledge, skills, and experience required to perform them.
- Employers seek workers who possess a specific combination of technical skills and experience, often coupled with a college degree, soft skills, and business or industry knowledge. Typically, employers prefer job candidates with the exact skill fit who require no additional training.
- Formal education prepares graduates to be generalists rather than specialists.
- There is no single path to prepare a worker for a professional IT job.
- Demand for resources is much higher than the supply

Pakistan Specific Challenges:

- No data on Pakistani business' needs

- Low literacy rate and decreasing rate of enrolment in universities/institutes
- Interest in IT education low
- Opportunities in the banking and telecom industries, both in the region and worldwide, are too attractive.
- Educational system capacity does not supply appropriate job candidates
- Quality of graduate and post graduate institutions varies considerably. Tier 1 institutions are not producing enough graduates while a majority of Tier 2 institutions over the years have not been able to move to Tier 1.
- HR produced generally does not have the required Knowledge & Skills:
- In general, low quality of education in our universities/institutes, primary, secondary, and intermediate level institutions. Specifically, low quality in the following areas adds to the overall challenges:
    - Faculty and management
    - Curriculum and its continuous updating
    - Material resources and maintenance (buildings, labs, library, teaching tools, etc.)
    - Processes
    - Examination/assessment system
- Lack of political will at the highest leadership levels to implement reform
- Reforms require a huge amount of finances, which is difficult to arrange.
- Lack of capable, motivated, dedicated, fearless, and high integrity teams to implement reform.
- Lack of political will and resistance to change by both faculty and administration within universities.
- The existence of vested interests both within and outside universities.
- Due to the size and stage of the IT Industry, opportunities to gain international, enterprise level and large project experience as a graduate is limited.

Objective
- To develop a long term HR development plan in line with **i**ndustry requirements

Recommendations

Needs Analysis

- Commission an IT HR Needs Assessment study that will outline the country's requirements for the next 20 years and encompasses all sectors (not just IT). IT companies require a broad range of human resource from analysts to technical and domain experts.

Next Steps:

An RFP has already been drafted and a consultant has already been selected.
Funds need to be injected so that the study can be commissioned.
The study is an extensive one and will take a year to complete.
Once the study is completed, recommendations made in the study will need to be adopted by the HEC.

Finance

Finance Background

IT and ITES companies in Pakistan have been set up by individuals using personal funds or money borrowed from friends and family. Young people with bright ideas are barred from outside financing because of they lack collateral. In other countries, a venture capital and angel investor culture make it possible for these innovators to access funds from elsewhere.

Once Pakistani youth have set up businesses and reach a certain stage of development, they find it difficult to scale up, ensure commercial viability, and find the capital to access international markets. Banks do not recognize their intellectual capital and are hence loath to loan them any money even against firm contracts. Hence it becomes difficult in the face of increasing infrastructure, training, and marketing costs for them to grow beyond a certain level.

Key Challenges in Finance

Much more needs to be done on projecting the success of IT companies so that the hesitancy on the part of banks to fund growing companies can be tackled. P@SHA is planning to float a fund for the purpose, asking for specific relaxations and dispensations aimed at maximizing the returns not only in monetary but in overall impact. It is suggested that a similar set of IT-specific financial incentives be subsequently offered to banks, so that finding this sector becomes more attractive.

Objectives

- To make it possible for young startup companies to innovate and develop their ideas, turning them into viable businesses.
- To help existing companies to scale up and be able to access larger globally-sourced projects.
- To assist companies in the IT and ITES sector to build on their current success.
- To make it possible for burgeoning entrepreneurs to access capital, so that they can turn ideas into products.
- To increase the size of the whole industry by creating new players

and strengthening existing ones

Recommendations

Working Capital and Leasing

- SBP should amend prudential regulations to recognize "certified" / valued software as security for financing.
- Allow streamlining and higher percentages of royalty and license fees for software - expand the scope to IT and IT-enabled service-related intellectual property by improving the provisions of the SBP FE Manual Chapter XIV para 12. This will ensure transfer of technology to the IT sector.
- Enable three-way and multiple jurisdiction "merchanting" for the IT and IT enabled sector by amending the SBP FE Manual Chapter XIII para 46.
- Amend SBP prudential regulations and the FE Manual to allow individuals access to EFS.
- Amend SECP regulations and the Income Tax provisions to book losses of investments up to 40% in companies (as compared to the current 20% allowance).

Relevant Authorities:

- SBP
- SECP
- FBR

Timeline: Immediate

Infrastructure

Infrastructure Background

Clusters need to form in order for the industry to grow. These are young companies (mostly in the 2-7 year bracket) set up by people with no access to capital, or startups that need space, mentoring, and an ecosystem. They cannot flourish in isolation. They will continue to have issues because of lack of adequate affordable space, lack of uninterrupted and clean power supply, insufficient and expensive bandwidth, lack of showcasing facilities, and no access to capital.

Key Challenges in Infrastructure

Lack of available affordable space, stable power, and connectivity continue to be a problem for most companies in the major cities. Specific challenges include:

1. <u>Office Space</u> P@SHA studies estimate the total space requirement by 2011 at 7.5 million sq ft at a reasonable rate. Incubation centers are all needed in all three major cities to incubate young innovative companies that are emerging or those that already exist.
2. <u>Electrical Power</u> The grid power generation and distribution sector is unable to cope with the demand for electricity, hence captive generation of power is essential to keep offices running and to ensure that critical equipment does not fail. The additional cost of captive generation means that the software sector must budget an additional percentage per annum on this account. This naturally places a ceiling on the retained income per seat for both software and software (IT enabled) services.
3. <u>Network Connectivity</u> The country continues to be precariously placed as far as the competitive reliability of international connectivity is concerned. Some links are satellite based. One way out is to set up a nodal international connectivity agency, whose job it is to deliver a guaranteed base bandwidth to the IX. The cost of this, which is amortized over fiber and satellite links, will be the baseline price to ISPs and/or telcos, preferably ISPs directly, as telcos may use the monopoly handed to them to skew local pricing.

4. <u>Voice Over Internet Protocols (VoIP)</u> VoIP has the potential to bring unprecedented communications benefits to business users and consumers in Pakistan by increasing competition and expanding ICT offerings. To ensure that VoIP can reach its full potential and is not stifled by unnecessary or poorly tailored regulation, we recommend that the government:
    a. Recognize the distinct potential of VoIP technology and allow all interested service providers to provide IP-enabled services
    b. Permit the development and use of all VoIP technologies so that Pakistani technologists, business users, and consumers are at par with their counterparts in other countries.

Objective

To provide ready-to-occupy space with
- Clean, stable uninterrupted power
- A safe secure environment
- Fast and reliable internet and telecom connectivity
- Showcasing, conference & exhibition facilities
- Affordable rent for startup, young and growing companies
- Incubation Centers
- R&D and testing facilities

Recommendations

Internet Governance

- Deregulation of VoIP - Recognize the distinct potential of VoIP technology and allow all interested service providers to provide IP-enabled services.

- Permit the development and use of all VoIP technologies so   that Pakistani technologists, business users, and consumers are at par with their counterparts in other countries.

- PTA regulation should be amended to reflect competitive termination rates (in line with the region).

<u>Next Steps:</u>

PTA should incentivize ISPs to offer unrestricted capacity at each throughput speed band on local traffic, in order to encourage rapid proliferation of local data services accessible over shared and low cost and mobile personal data devices. Industrial building societies should also be incentivized to offer data networking directly to occupants, in order to reduce the supernumerary billing layers between basic service providers and end-consumers.

MoIIT should offer long term incentives to meet minimum global standards for workplaces, led by the IT industry
PTA should deregulate VoIP

MoIIT should offer subsidized office space with uninterrupted power supply, clean and fast connectivity, and clusters needed at affordable prices so as to allow for IT growth to continue

<u>Relevant Authorities:</u>

- Ministry of IT
- PTA

<u>Impact:</u>

The non-availability of a rationalized and legal VoIP regime, in conjunction with several infamous actions by the government to clamp down on use of VoIP, is hampering the certainty and availability of infrastructure to IT and IT-enabled businesses. This makes them cost uncompetitive and therefore confirms Pakistan as an unattractive destination for and from which to provide Internet-based services. Introduction of certainty, deregulation, and access to this infrastructure will have a exponential impact on businesses being set up and small and medium sized businesses being enabled to capture a greater share of the global outsourcing market.