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Bangladesh – An emerging Market for IT/ITeS Outsourcing: An analysis of why Limelight Networks Inc. should outsource to Bangladesh.

Rahman, Ashiqur

INDEPENDENT UNIVERSITY, BANGLADESH

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Bangladesh – An emerging Market for IT/ITeS Outsourcing:

An analysis of why Limelight Networks Inc. should outsource to Bangladesh.

By

Ashiqur Rahman

ID# 0820553

An Internship Report presented in Partial Fulfillment of the Requirements

For the Degree of Bachelor of Business Administration



INDEPENDENT UNIVERSITY, BANGLADESH

Bangladesh – An emerging Market for IT/ITeS Outsourcing: An analysis of why Limelight Networks Inc. should outsource to Bangladesh.

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ID# 0820553

Has been approved

November 2013

Submitted to

Saquib Shahriar

Lecturer

School of Business

INDEPENDENT UNIVERSITY, BANGLADESH

Preface

BBA program is targeted to produce skillful Business Executive having an absolution professional outlook. So, graduates of the discipline should be pragmatic and should have a first-hand view of the real life business environment. The prime objective of the internship program is to produce the learners with practical organization environment so that they can tune up themselves for the job in future and can get an opportunity to reconcile the theoretical knowledge with real life situation. For this reason internship program is indispensable for the BBA program.

As a student of School of business, Independent University of Bangladesh, I worked for Limelight Networks Inc., in San Francisco, California. I decided to write my research report on the IT outsourcing market of Bangladesh for Limelight Networks Inc. I have tried my best to make this report effective and realistic and my endeavor will be fruitful at that time if anybody is benefited from this on.

With best regards,

.....

Ashiqur Rahman
ID # 0820553

Acknowledgement

I am very grateful to Almighty ALLAH for giving me the opportunity to complete my report in due time. Without his help, it would not have been possible.

At first, I offer my sincere gratitude and thanks to the respective Supervisor Saquib Shahriar, Lecturer, School of Business, Independent University of Bangladesh who's guidance influenced me to complete my internship program properly.

A successful internship report reflects the affiliated organizations activities as it provides a virtual ground where the implication of theoretical knowledge experience with the practical teaching. I am more benefited and decorated for being oriented with a group of qualified and benevolent people.

I would like to thanks Mr. Vaitessh Kolady, Senior Vice-President and also Mr. Deepesh Chourey, Director, Engineering and all the other colleagues I had during these three months who have helped me to prepare my report. My special gratitude goes to Mr. James Muhelner, whose valuable advice and co-operation taught me a lot about the outsourcing sector & also helped me to prepare my report.

Finally I would like to acknowledge all the officials and employees of Limelight Networks Inc. for their nice & friendly co-operation.

Letter of Transmittal

12th December, 2013

Saquib Shahriar

Lecturer

School of Business

Independent University, Bangladesh

Subject: Submission of internship report on the analysis of why Limelight Networks Inc. should outsource to Bangladesh.

Dear Sir,

It's my pleasure to submit you my internship report on "The analysis of why Limelight Networks should outsource to Bangladesh." I have completed my internship program in Limelight Networks Inc. as a part of my study. I have tried myself to explain my learning and experience I have gathered form my internship program briefly in this report.

I appreciate that this approach really contributes in giving my course learning a lasting shape in me. The entire report is based on my practical experience. I have great hope that the report will meet your expectation and aid you in getting a clearer idea about the subject. Your valuable and authoritative advice will inspire me to produce further sound study in the future.

Sincerely,

Ashiqur Rahman

ID# 0820553

Independent University, Bangladesh.

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Executive Summary

Global IT enabled services industry has been growing steadily in the last decade. The current global economic crisis has led to shrinking IT budgets for corporate, but there has been a continual growth in demand for global demand of IT services, with cost optimization being the primary driver for off-shoring services to the developing countries in order to acquire the best options at the cheapest possible rates. The increasing cost being the primary driver for off-shoring IT services provision from the West to the East. The increasing field of development and pioneer technology, with new service delivery paradigms like cloud computing and multiple sourcing, is set to transform the ITES industry globally.

Over recent years, Bangladesh has made major strides in laying the groundwork for a diverse and successful IT services market. The IT services industry within Bangladesh has been growing serving international clients and domestic clients in banking and telecom sectors. The industry now employs over 20000 people, and is exporting services to European, North American and East Asian clients. Bangladesh's emerging IT service players already have strong credentials. Bangladesh offers a vast pool of young, trained and English speaking resources – available at costs almost 40% lower than established destinations like India and Philippines. Government authorities have demonstrated a determination to promote IT services industry in the country – providing cheaper bandwidth and alternate international cables, setting up Technology parks and providing tax holidays for export oriented industries. The "Digital Bangladesh" initiative of the government is helping setup infrastructure for enhanced connectivity, ICT based citizen service delivery and ICT based Education system. There is evidence of many global players, like Samsung, AMD, VizRT, WorldBridge Global – setting up operations in Bangladesh.

With today's challenging economic conditions, more companies are looking at effective use of external providers to help them support and expand their operations. Bangladesh has positioned itself as a key location for consideration by enhancing delivery capability and skill availability, lower costs of operations, making focused investments in telecom and IT infrastructure, and highlighting success stories.

Introduction

1.0 The Current State of Global Outsourcing

The global sourcing market has been growing at 16% over the last 5 years reaching a size of 1.06 trillion dollars in 20101. This growth, however, tapered down last year compared to previous years owing to adverse global conditions such as slow world GDP growth, rising inflation, declining corporate profits and the near bankruptcy of a number of European countries. Global IT spend increased by a mere 5.9 per cent in 2010, with spending on IT services growing by just around 3 percent. Despite expectations of a recovery in 2011, client spending remained tepid in the first half of the year. Transaction volumes in the IT outsourcing market fell for both the IT and business process outsourcing (BPO) markets, by seven percent and 12 percent respectively during the third quarter of this year, its first substantial decline in twelve months3. According to Gartner, global spending for IT outsourcing services will reach $315.8 billion in 2011, a growth of 7.7% over 2010. Despite the worrying economic situation, the technology research firm does not expect dramatic cuts to enterprise IT budgets in 2011 and 2012.

1.1 The Bangladesh Story

The last 5 years have been a watershed in Bangladesh IT/ITeS industry. During this time, the internet connectivity has been enhanced vastly over the country. The successive governments have made IT as a focus area, and have extended favorable policies for the growth of the sector. Subsidies towards technology imports and tax breaks were provided to the industry. With global outsourcing industry witnessing an upward trend, and sourcing enterprises looking at lower costs for improved service delivery, the Bangladeshi IT/ITeS industry has been able to take advantage of its vast resource pool and government support to make its presence felt in Global outsourcing market. The overall size of the IT/ITeS industry in Bangladesh stood at ~250 million USD in 2010. The following table summarizes the growth experienced by export oriented Bangladesh IT/ITeS industry.

	2008	2011	Growth
IT Services & Non Voice ITeS	24.82	45.31	22%
Voice based ITeS	NA	2	NA
Total	24.82	47.31	24%

The last 5 years have been a watershed in Bangladesh IT/ITeS industry. During this time, the internet connectivity has been enhanced vastly over the country. The successive governments have made IT as a focus area, and have extended favorable policies for the growth of the sector. Subsidies towards technology imports and tax breaks were provided to the industry. With global outsourcing industry witnessing an upward trend, and sourcing enterprises looking at lower costs for improved service delivery, the Bangladeshi IT/ITeS industry has been able to take advantage of its vast resource pool and government support to make its presence felt in Global outsourcing market. The overall size of the IT/ITeS industry in Bangladesh stood at ~250 million USD in 2010. The following table summarizes the growth experienced by export oriented Bangladesh IT/ITeS industry. Having gained experience and credibility in the international market for services, Bangladeshi companies are now graduating from low value added tasks to higher end engineering and product development assignments – Bangladesh based Eyeball Technologies has developed the Blackberry Playbook's Video chat for BBM, for Research in Motion (RIM) a Canadian giant. Other companies like SSD Tech have been developing mobile platforms for VAS for companies across 2 continents, while GraphicPeople has been creating promotional material in multiple languages for Dell, the technology powerhouse. Global giants like Samsung and AMD have opened/in process of setting up their R&D centers in Bangladesh. It is no surprise then, that global Technology research house, Gartner has included Bangladesh in its list of top 30 outsourcing destination in its 2010 report. Even more spectacular is the growth of the freelancer community within Bangladesh. With no marketing or corporate backing, over 10,000 freelancers from Bangladesh have billed over USD 7 million over the last 1 year. This has led to Bangladesh being mentioned in top few destinations among freelance worker nations, and Dhaka- the capital city, to among the top 5 cities for freelance outsourcing work.

1.1.1 The Information Economy

Bangladesh, despite being ranked among less developed countries, has been a pioneer in reaching out to the larger population through technology. Mobile phone penetration has been among one of the highest in the developing economies with a teledensity of over 40%. The internet penetration rate is estimated to be at 7% - with most people using mobile internet. The use of international bandwidth has risen 200% in 3 years to 2011 with capacity upgrades for international bandwidth of over 500% underway into 2012/13. The "Digital Bangladesh" program of the government has initiated the process of e-services for government service delivery and capacity building for the population at large. As in December 2011, Bangladesh had over 2.1 million Facebook users. Over 600,000 computers (including laptops) were sold in Bangladesh in 2010.

1.1.2 The IT/ITeS Industry in Bangladesh

The IT/ITeS sector in Bangladesh is over three decades old and has been catering to established clients both globally and in the domestic market. Most players initially targeted the IT potential in the domestic industry. The DANIDA aid program in 2003 was a major booster to the nascent homegrown industry, and enhanced access to Scandinavian markets created the first wave of IT companies serving global markets in Bangladesh. Many of these companies have now successfully extended their geographical reach to other regions like Europe and US. During the latter half of the last decade, the services sector (primarily BFSI and Telecom) in Bangladesh grew phenomenally. This led to a robust growth in the domestic IT /ITeS services demand, and currently the industry clocks almost twice the revenue from domestic IT services sector against the IT/ITeS exports. The growth of domestic industry has spurred a growth in the functional and technical knowledge of the resources – with deep domain understanding in the BFSI and Telecom sectors. A lot of product based companies have also picked up steam to cater to the demands of the local and regional industry. Currently there are over 800 IT and Non-Voice ITeS companies in Bangladesh, out of which around 200 works on a global basis for outsourcing and project based delivery models.

The availability of trained manpower at competitive prices – and well-established delivery capabilities, has led to many global players looking at Bangladesh for captive development centers in recent times. Notable among them is Samsung (having set up a 250 person R&D center with aggressive growth plans), VizRT (Acquiring product companies from Bangladesh and building scale) and media giant WPP (buying into GraphicPeople and developing it into a global delivery location).

In the recent years, Voice based BPO services are also evolving in Bangladesh. Bangladesh Call Center and Outsourcing (BACCO) – an association with over 70 members- claims over 15000 agents are working in the sector. Though small in comparison to IT services, these BPO services have clocked over 2 million USD in revenue in 2010, and are growing fast. WorldBridge Global- a US based outsourcer has expressed interest in setting up BPO operations with around 10000 seats in Bangladesh with a proposed investment of USD 150 million.

1.1.3 Outsourcing the Bangladesh Way

The development of Bangladesh's outsourcing business has important implications for global customers seeking to explore it as a new destination for outsourcing work. Decision makers primarily judge outsourcing locations by cost, availability of skills and manpower, both current and future, and across all these areas, Bangladesh scores well.

Most of the work done by the Bangladeshi outsourcing pioneers comprises low-value add jobs such as graphics design and website development. Some companies also work on product development, mobile application development and software development. However, today many global companies – once clients of these pioneers, have bought into them, and are using them for mid-range software and IT outsourcing projects. Companies like VizRT (Norway), Bording Data (Denmark) and WPP (Graphicpeople) are examples. The Bangladeshi companies provide the parents with a range of services from back office administrative work, graphic designing, DTP and customer service requests, to high-end IT, product development and enhancement jobs. In recent years there has been a move towards Business Process Outsourcing also – a trend which will further strengthen with enhanced connectivity and bandwidth. "Hardworking resources, not shy to learn - at a fraction of European costs, there is huge talent pool in Bangladesh- they just need the opportunity". Fatheme, Executive Director of Nordic Chamber of Commerce and Industry in Bangladesh – the industry body of Nordic Businesses in Bangladesh which includes 11 IT/ITeS companies as its members.

Quality improvements in skill levels and delivery capabilities have been steady. Many of Bangladeshi outsourcing vendors have got certifications in CMM level 3 or higher over the last 3 years. Also, a few companies got themselves certified to robust information security processes by getting ISO: 2700 certified. Owing to a huge domestic market in BFSI and telecom sectors, Bangladeshi vendors have also advanced to offering specific business knowledge in areas such as Core Banking solutions, Micro credit solutions, Islamic Banking and Mobile application development and deployment. Such insights create closer links between vendor and client, resulting in higher productivity and profitability for both. In addition, Bangladeshi companies are working extensively on Desktop Publishing, Graphic design and content development for web applications.

Origin of the Report

The internship program is most crucial part of the BBA degree coursework. The entire program duration is 12 weeks (3 months). Through exposure to the practical activities of the professional world, the course helped teach the students to be disciplined, trained, and also smart in various aspects. In order to complete my internship I am submitting my present work experience with Limelight Networks, Inc. I am working for the company from 29th August, 2012 till date.

Literature Review

According to Lacity & Willcocks (1998), Fitzgerald & Feeney (1995), "Information Technology Enabled Services are provided by third party vendors who are responsible for managing the Information Technology components on behalf of their clients within a working place. IT Enabled Services means handling the management of some or all of an organization's information technology (IT), systems (IS) and related services by a party using the tools pioneered by either themselves or another party." Chaudhury, Nam & Rao (1995) also mentioned in their paper that, "Information Technology Enabled Services are defined as the trade of various information systems functions such as managing of data centers, operations, hardware support, software maintenance, network, and even application development to be provided by a provider to its clients." In the words of Carmel & Agarwal (2002), "Information technology enabled services (ITES) describes a process whereby an organization decides to vend or sell its own developed IT assets, people and activities to another party, who in exchange receive these services for an agreed fee over an agreed time period. " SOTA has identified "Information

Technology Enabled Services (ITES) as the decision by an organization to contract an external provider in the delivery and/or support of IT and/or IS services and functions."

The relationship between domestic and international IT industry is well documented through research by a handful of sources that are both private and government based. IT capital is broadly defined as the part of capital stock which comprises investments in computer hardware, software and telecommunications (Dedrick et al, 2003). The BASIS 2011 survey indicates that majority of the software companies in the country have strategically maintained a flexible skill portfolio by including proprietary technology platforms. The most noticeable issue here is that no IT developers currently in the country have pioneered any form of proprietary technology based on

which to establish a unique selling point, instead relying on the brainchild of foreign industry leaders like Microsoft and Oracle.

In terms of capitalizing on the exporting front by the domestic IT industry, the research conducted by BASIS in 2011 shows that the industry could not perform according to its potential when compared to outsourcing IT firms in other countries in the region. Industry experts such as Habibullah N. Karim, CEO of Technohaven Ltd. & current president of BASIS have identified a number of issues including lack of infrastructure, shortage of qualified IT personnel, absence of proper branding & marketing etc. There are already signs that global companies have started to seriously consider Bangladesh as their outsourcing and back-office location. In February 2011 Daily Star reported Samsung, one of the global leaders in consumer electronics, launching its high-end research & development center in the capital city of Bangladesh with over two hundred engineers. Currently there are approximately ten small to mid-size offshore back-office service centers operating on behalf of international companies (e.g. AMD, LG & IBM) in the country.

Objectives

- To identify the potential competitive edge Bangladesh has over other countries for IT outsourcing market.
- To identify the factors and their detrimental impact on the growth capacity of IT service providers in the country.
- Be able to forecast the business prospective for Limelight Networks for outsourcing to Bangladesh and various ways they can be benefitted.

Methodology

I. Secondary Research

a. To gather general information on the selected 3 sample organizations (two IT firms and the freelancing community).

b. The sources mainly involve browsing through websites, newspaper articles, books, research publications and company annual reports.

II. Primary Research

a. Type of research will be semi-structured exploratory since it is most effective means of determining the best research design, data collection method and selection of subjects.

b. Prescribed research will focus on problem identification, which is to understand the problems highlighted by the source materials, rather than solving any predicted problems.

c. Method of conducting the research involves market survey through personal in-depth interview with executives (preferably with IT knowledge) from the selected institutions.

III. Data Collection & Sampling

a. A detailed survey questionnaire consisting of open-ended & close-ended questions was developed to ensure that relevant data would be acquired as accurately as possible.

b. Upon recommendation from my supervisor, sample size chosen for the research was limited to 10 employees from 2 off-shore institutions out of a population of 75; a combination of employees ranging from junior executives all through IT department heads and top level management.

c. The sampling technique was purely on a judgmental basis since the institutions were approached based on direct personal contacts.

IV. Analysis of Gathered Data

a. After successful collection, all of the data was analyzed in order to understand the perspectives of the sample organizations regarding the topic of discussion.

b. Based on the analysis of the data, specific recommendations have been identified that will provide an outline for a course of action to take in order to excel Limelight Network's business growth.

Scope & Limitations

The scale of this research is limited in size and scope since I have encountered with some of the IT outsourcing firms. There will most likely not be enough data collected from the primary sources to provide a solid forecasting of market potential for Limelight Network's Outsourcing project. Also there will be insufficient data to base my research and derive any meaningful solution to the topic of research. However what I ultimately hope to achieve through this research paper is a strong understanding of the IT service industry developing in Bangladesh and how Limelight Networks Inc. plans on taking the lead of the business in the future thought outsourcing in Bangladesh.

Timeline

MONTH	OCTOBER				NOVEMBER				DECEMBER			
WEEK	1	2	3	4	1	2	3	4	1	2	3	4
ACTIVITIES:												
Research Proposal												
Questionnaires												
Secondary data collection												
Primary data collection												
Draft Report												
Final Report												
Internship Viva												

Company Overview

Limelight Networks, Inc. operates a computing platform. The company provides a suite of integrated services, including content delivery, Web and video content management, mobility, Web application acceleration, cloud storage, and related consulting services that enable companies and other organizations to create, manage, and deliver a global digital presence. The integrated suite of services that the company offers collectively comprises its Orchestrate Digital Presence Platform (Orchestrate, or the Orchestrate Platform). It provides the Orchestrate Platform as software-as-a-service (SaaS) and Infrastructure-As-A Service, which other than content delivery services, are referred to collectively as value-added services (VAS). The company offers VAS both collectively as the Orchestrate Platform and individually for customers that might not be inclined or able to adopt the entire platform.

History

Limelight Networks was founded in 2001 in Tempe, Arizona as a provider of high-performance content delivery network services to help customers provide their end users with high quality media experiences online. Since then it has evolved and launched the Limelight Orchestrate Digital Presence Platform (Orchestrate) to help customers create relationships with end users through video and content that engages them across any connected device anywhere in the world.
In July 2006, the company closed a $130 million equity financing round led by Goldman Sachs Capital Partners. Limelight Networks later raised $240 million in an initial public offering, during June 2007, selling 16 million shares at $15. In April 2008, company founder Michael Gordon was recognized as a "Streaming Media All-Star" by StreamingMedia Magazine, for his contributions to the industry.
Over the years Limelight has received several other awards for its services including, receiving Frost & Sullivan's prestigious award for Product Line Strategy in 2012. Forrester Research named Limelight a Strong Performer in The Forrester Wave™: Online Video Platforms, Q1 2013.

Vision and Mission

Vision:
Transforming the digital experience to advance the way we live, work, and play.

Mission Statement:

We will lead the content delivery network (CDN) industry by aggressively and profitably growing revenue and market share and delighting our customers with innovative services and solutions worldwide.

Position Statement:

Our position statement provides direction on who we are in the marketplace. To businesses capitalizing on new media experiences online, Limelight Networks is the content delivery partner that enables the most engaging and reliable user experience through a highly scalable architecture and robust global network that maximizes the "four dimensions" of delivery: object size, library size, audience size, and popularity. These characteristics, combined with Limelight Networks' impassioned and unwavering service, empower organizations to propel their business forward.

Values

Limelight's values express who they are as a company and what they stand for. They sum up the principles and standards by which we work every day and set us apart from the industry.

• Ingenuity – They relentlessly push for something new, fresh and unique.

• Relationships – Their genuine desire for collaboration makes us great partners.

• Authenticity – No matter how big they get, they remain humble and grounded.

• Conviction – They live and breathe what they do and their enthusiasm is contagious.

Their personality is the external representation of their values. It answers the question:

"What kind of company do you work for?" There are five personality traits that guide them on how they speak about Limelight Networks as a company and influence the way. They talk about our products and services. These personality traits are not applied literally, word for word, but are instead used as a sort of launching pad to inspire and ignite their messaging.

• Inspiring – They value ingenuity in all its forms. Never content to settle for the status quo, they relentlessly push for something new, fresh, and unique. And in turn, we inspire others.

• Creative – At their very essence, they are craftsmen (and women). Artisans, Creators. Which is why, and how, they artfully and skillfully, engineered a unique, innovative network.

• Great partners – They love to share their knowledge, passion, and spirit with their customers. And it's this genuine thirst for collaboration that makes them such great partners.

• Real – In all that they do, they value authenticity. No matter how big they get, they remain humble and grounded in spirit. That's just who we are.

• Impassioned – They do what they do because it's in their blood. In their hearts. In their souls.

Services

The company's integrated, feature-rich, suite of services and solutions are purpose-built to enable customers to build and manage their digital presence across Internet, mobile, and social channels. Its primary services include the following: Content delivery services improve the reliability and performance of digital media and enterprise Websites by using the company's global computing platform to deliver rich media files, such as video, music, games, and software, or live streaming of corporate or entertainment events (the company supports various major formats, including Adobe Flash, QuickTime, Windows Media, RealNetworks RealPlayer, WebM, and MP3 audio). Video content management services help organizations publish, manage syndicate, analyze, and monetize video content through a cloud-based service. Services also include off-the-shelf players for deployment, a mobile application to capture video in the field, and monetization features that enable customers to integrate advertising into the video playback experience. Mobile delivery services help publishers deliver properly-formatted, device-optimized video, and Web content to almost any media-enabled mobile device, as well as to present dynamic pre-, mid-, or post-roll video and audio advertising into media that is delivered to mobile or connected users. These mobility services automatically detect the requesting mobile device and provide a version of the content suitable to that device. Web content management services enable content publishers to create, manage, and publish local and global Websites through a cloud-based service, combining Web content management, site marketing and personalization tools, and mobile publishing to help any organization be a Web publisher and marketer. Web acceleration services improve Web experiences by providing consistent performance from any geography for personalized content, online commerce transactions, and Web applications. Cloud storage services provide customers with a redundant, geographically diverse storage of media and enterprise content offering policies for global geographic placement, content workflow, and business logic controls. Professional services help customers assess their Digital Presence Management strategies and optimize their publishing, e-commerce, mobility, content distribution workflows, and provide support for network architecture design, storage infrastructure, Web application development, creative design, live event execution, and the design, deployment, and management of infrastructure. Reporting and analytics services help customers manage and configure how content is delivered and presented to online users. Together, the company's set of reporting and analytics services help online businesses increase efficiency, reduce expenses, improve end-user experience, and provide insight into performance of content delivery or Web property. These services include features, such as customer provisioning, custom control through delivery and storage options,

custom reports, and Internet health monitor — which provides insight into sources of end user experience issues.

Limelight Networks Global Computing Platform

The company's global computing platform provides redundant storage, bandwidth, and computing resources in support of its services and solutions. Its delivery locations are interconnected through its global network and also connected to multiple Internet backbone and broadband Internet service provider networks.

Customers

The company's customers operate in the media, entertainment, gaming, software, enterprise, and public sectors. As of December 31, 2012, it had approximately 1,451 customers worldwide, including various names in the fields of video, digital music, news media, games, rich media applications, and software delivery. During 2012, its customers included Amazon, Bell Canada, QVC, Swiss Re, Electronic Arts, Ciena, NetApp, StarTribune, Middle East Broadcasting Company, NFL, Microsoft Corporation, Netflix, Nintendo Wii, Nissan, Sony PlayStation, ABC, BBC, NBC, Punjab Kesari Group, and Fasig Tipton. Markets The company operates in three geographic areas — North America; Europe, the Middle East and Africa (EMEA); and the Asia Pacific, including Japan.

Sales and Distribution

The company's sales and service professionals are located in 6 offices in the United States with an additional 11 office locations in EMEA and the Asia Pacific. The company targets media, high tech, software, gaming, enterprise and government agencies, and other providers of online media content through telesales, field sales, distribution partners, and resellers. Through its reseller relationships, the company sells its services to reseller companies who have relationships with target customers in specific regions or markets.

Research and Development

The company's research and development expenses were approximately $20.2 million, including stock-based compensation expense of approximately $2.7 million in 2012. Intellectual Property As of December 31, 2012, the company had received 52 patents in the United States, expiring between 2023 and 2032, the Patent and Trademark Office has allowed 5 more U.S. applications, and it had approximately 55 U.S. patent applications pending. The company has 12 issued patents in Australia and 1 allowed in China. As of December 31, 2012, the company had received nine trademarks in the United States. The company's name, Limelight Networks, has been filed for multiple classes in the United States, Australia, Canada, the European Union, India, Japan, South Korea, and Singapore. It has seven pending trademark applications in foreign countries, and 22 non United States trademarks registered. Significant Events In August 2013, Limelight Networks, Inc. announced that it is expanding its presence in India with a new point of presence in Mumbai. The company would also begin selling its Limelight Orchestrate Digital Presence Platform in the country.

Competition

The company's primary competitors for content delivery services include Akamai Technologies, Inc.; Level 3 Communications; AT&T; Amazon; CDNetworks; Edgecast; and Internap Network Services Corporation, which acquired VitalStream. Its primary competitors for the company's SaaS offerings include Brightcove, Ooyala, Unicorn Media, Sitecore, Adobe Flash, Crown Peak, and Interwoven, as well as open source products, such as Drupal.

Acquisitions

- May 2009, the company acquired Kiptronic, Inc., a privately held provider of device-optimized content delivery solutions and dynamic advertising insertion.
- April 2010, the company acquired EyeWonder, Inc. for $110 million.
- August 2011 the company acquired Delve Networks, Inc., a privately held provider of cloud-based video publishing and analytics services
- May 2011, the company acquired AcceloWeb for $20 million.
- May 2011, the company acquired Clickability for $10 million.

Analysis: Why Limelight Networks Inc. should outsource to Bangladesh?

The global economic downturn is pushing Limelight Networks to find new ways of cutting costs, and this in turn will provide the much needed impetus to Bangladesh's budding software outsourcing industry. Bangladesh has, in the past, faced challenges with its marketing, negative perception and wanting infrastructure. However with government focus on infrastructure development and with wages and operating costs rising in traditional outsourcing favorites such as India and Philippines, Bangladesh emerges as a rapidly growing destination which offers several competitive advantages. Bangladesh offers an attractive business opportunity for multinationals interested in outsourcing or offshoring. This value proposition is drawn from the following strengths

- Labor availability and scalability: Bangladesh demographics may provide a constant supply of resources at extremely competitive costs.
- Language Skills: Bangladesh offers a ready pool of English speaking resources, with limited accent neutralization needs.
- Growing Education -Industry linkages: Bangladesh based companies- both domestic and multinationals, have built strong relationships with various Universities in the country to tap and train talent at the sources. Finishing schools to bridge the skill gaps between academia and industry are also coming up, allowing ready resources availability.
- Low Total Cost of Operations: Real estate, resources and attractive taxation policies help lower the total cost of operations compared to the other outsourcing destinations.

Attractive Demographics

Bangladesh has one of the most attractive population demography in the world – relatively high young population base as over 34% are in age group of 15-34 years; which is favorable for IT-BPO industry. Analyst projections reveal that this number is further slated to go up. This corresponds to a young working population of over 53 million people – large enough to man the fledging IT/ITeS industry for years while keeping the costs low. With nearly two-thirds of the population under the age of 34, the vast educated youth pool with the ability to read and write English can be trained in the required skills for making the country a potential offshore source of Software and Data Processing Services.

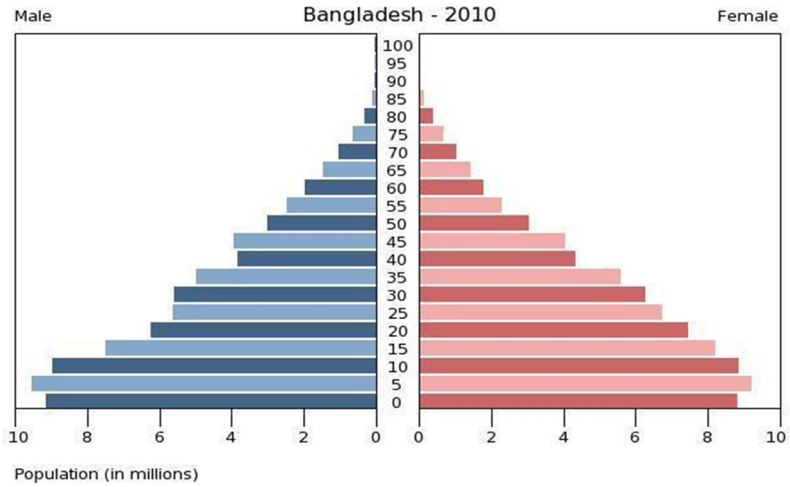


Figure 2 Population Pyramid for Bangladesh
Source : UN Database

This vast talent pool is going to expand further as Bangladesh's population is projected to grow at an annual average rate of 1.7 percent during 2008-20, reaching 194.8 million by 2013. The relevant population (15-34) is projected to grow to over 63 million by 2020.

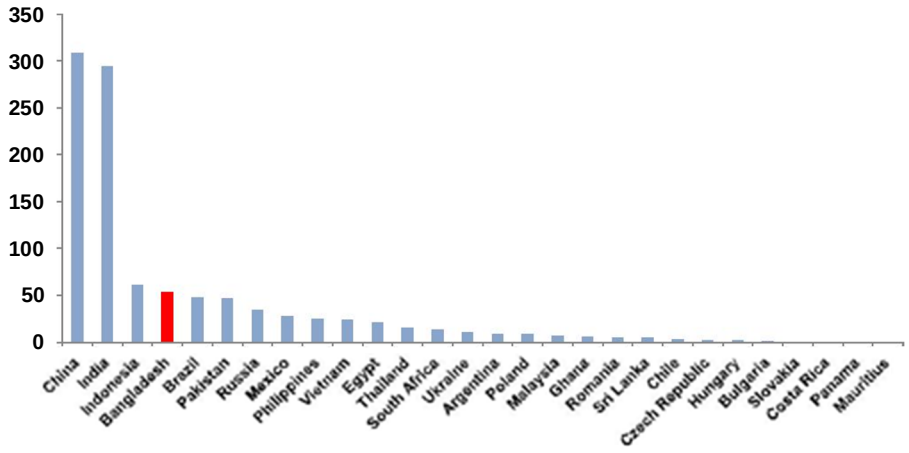


Figure 3 Population in the age group 16-34 in various countries
Source : UN Database
All numbers are in millions

Bangladesh's Pool of Skilled Workforce

Bangladesh has over 80 universities that produce over 185,000 graduates a year including more than 14,500 graduates and post graduates in IT-related areas. Over 5,000 of these students specialize in software engineering. Bangladeshi students have proved their potentials in the international competitions by winning a number of programming contests. Almost 5% of the population - almost 7 million people in the country knows English as the second language, and over 2.4 million graduates (1.5% of the population) - this is a ready labor pool to supply quality resources to the industry.

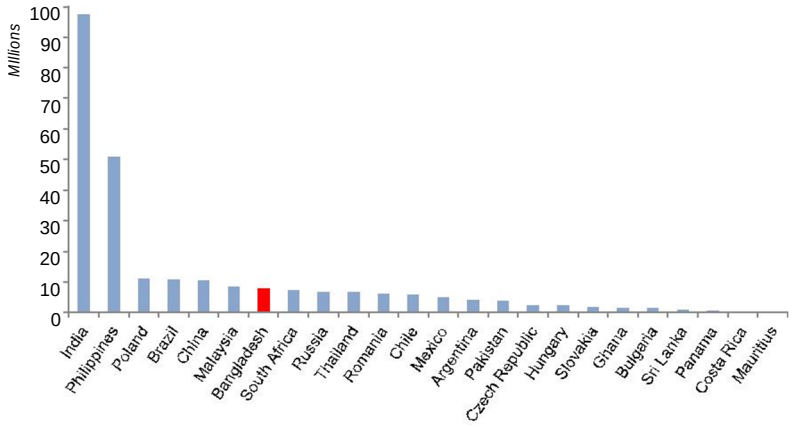


Figure 4 Population with English as the first or second language
Source : Cambridge Encyclopedia of English Language, KPMG Analysis

The quality of engineers and scientists produced by the Bangladeshi Universities is at par with most developing countries – in fact some of the global publications rate Bangladeshi graduates better than many of the developing countries. "The specialized service offerings for our clients allow us to do high-end product and engineering projects, and we hire the best talent from Bangladeshi Universities for that" says S M Mahabub Alam, Director Engineering of Relisource – one of the largest niches engineering Services Company in Bangladesh.

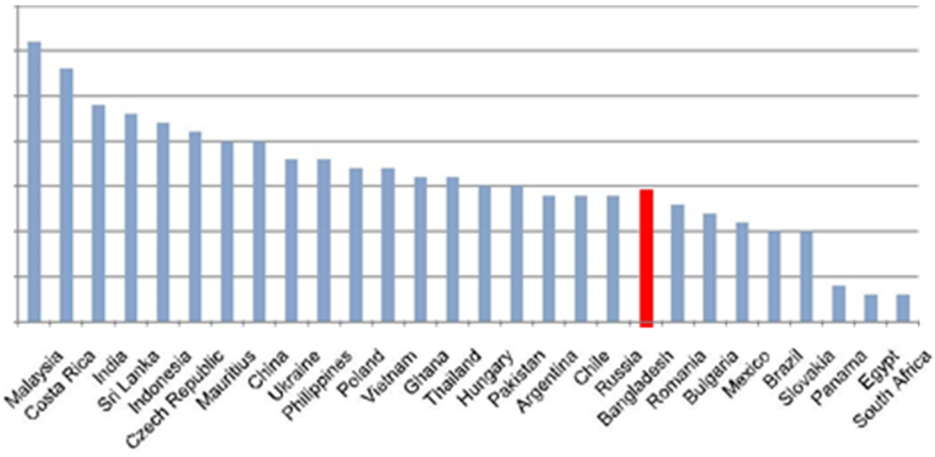


Figure 5
Quality of Education System in the country
Source : INSEAD WEF Global IT Report 2010-11 Represented as a perception index Out of a 1–7 (best) scale

The global IT training giant NIIT has reentered the Bangladeshi market recently. Such niche training providers would help in developing job ready resources for the IT and ITeS sectors. BASIS also runs specialized finishing schools for technology graduates to provide qualified job ready pool of resources.

According to BASIS and BACCO estimates, the country has close to 35,000 professionals working in the IT and BPO industry. In addition, there are over 5000 freelancers who together

clock over USD 7 million in revenues – the 4h highest among all countries in the world.

"The strength of our resources lies in their eagerness to work and learn – focusing on better service to delight customers" says Mahbubul Matin, President of SSD-tech – a Bangladeshi homegrown company now serving global telecom and FMCG players.

Language Capability

English is used as a second language primarily for business and education, though Bangla is the official language. A vast majority of the population, can read, write and speak in English owing to their Western-style education, a legacy of the British rule. Bangladesh currently has nearly 7 million English speaking residents, higher than its Latin America and East European counterparts. Also, most Bangladeshi private school students learn English from primary school level which enables them to produce almost all phonetics used in English, and reduces the time for accent neutralization.

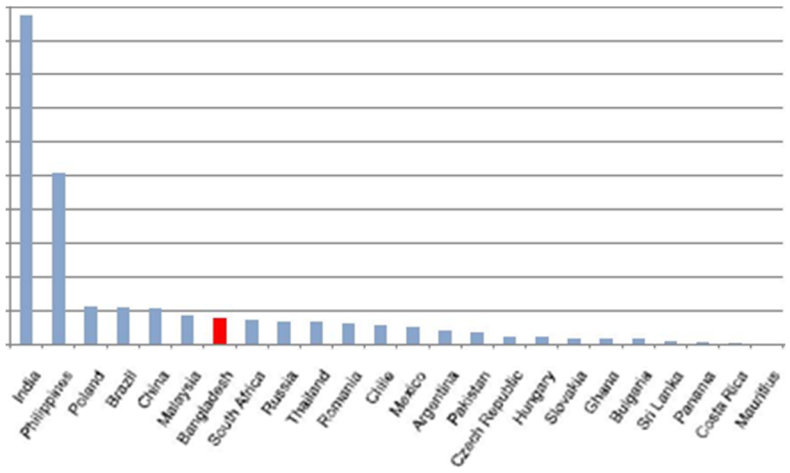


Figure 6
Quality of Education System in the country
Source : INSEAD WEF Global IT Report 2010-11 Represented as a perception index Out of a 1–7 (best) scale

Quality of Education

More than 1.3 million students enroll every year in the 80 private and public universities in Bangladesh.1 The education system in the country is ranked at par with other tier II & III countries of the world. Joseph Seungbyoung Oh, VP at Samsung Bangladesh R&D Center says "Most hires are technically sound, we have to invest in bringing them to speed on corporate work culture."

The country's National Education Policy 2010 has provision for introducing ICT studies in primary and secondary levels and setting up of technical education institutions. The government proposes to enhance the use of IT enabled pedagogy in school education, and has already trained over 40000 teachers as a part of this initiative. In the Global Competitiveness Report 2011-12 published by World Economic forum,2 Bangladesh ranks 85, 90 and 108 respectively for Quality of the higher education system, Quality of Management Education and Quality of Science & Math Education, higher than most of the other competing offshoring locations.

Cost Attractiveness – Labor Cost

The ability to operate at low cost is one of the prime value propositions for outsourcing, a major advantage possessed by Bangladesh. The country scores high in both labor and infrastructure costs, edging out comfortably over other Asian countries. The significant pool of young and entrepreneurial work force is available at a much lower wage other major outsourcing countries. Entry level wages in Bangladesh's IT industry, are over 50% cheaper than other countries in Asia-Pacific like India, Philippines, Malaysia, Sri Lanka, Thailand and Vietnam. When compared to Eastern European countries like Poland, Hungary, Russia, Ukraine, Czech, Romania and Latin American countries like Brazil, Chile, Mexico, it is significantly cheaper by over 75-80%.

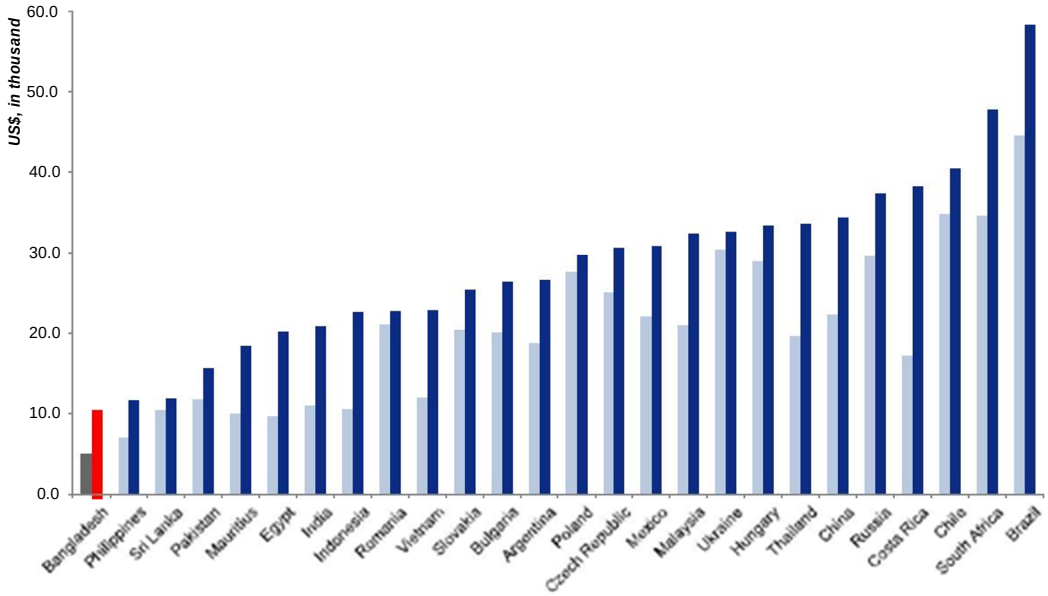


Figure 8
Average salary cost of IT resources at entry level and 5 year experience
Source : Payscale database, Sourcing Line, KPMG Analysis
All values in '000 USD

Cost Attractiveness – Infrastructure Cost

In addition to the low wages, costs in Bangladesh are fairly low compared to destinations in Asia, particularly in terms of office spaces. The Rental for office space in Central Business Districts (CBD) of Dhaka – Gulshan and Motijheel is less than 20% of that in Delhi CBD and 40% of Manila CBD. 1 In addition, there are plans develop dedicated technology parks, where the total cost of business would reduce further, as most IT infrastructure would be readily available.
Internet bandwidth costs have come down significantly in Bangladesh. From over 75000 BDT per MBPS in 2007 (over USD1000), the costs are down to around BDT 6000 per MBPS now (under USD 80).2 Though high by developed world standards, the costs are comparable with the offshoring destinations in Africa, and are further poised to come down with enhanced competition with more terrestrial links opening up in the next 3-6 months.

"The cost of bandwidth is high compared to other competing locations, especially considering the VSAT backup, but this would drastically reduce once the backup terrestrial and sub-sea lines are in place" says Imtiaz Ilahi, Managing Director of Graphicpeople – one of the largest ITeS services exporter in Bangladesh.

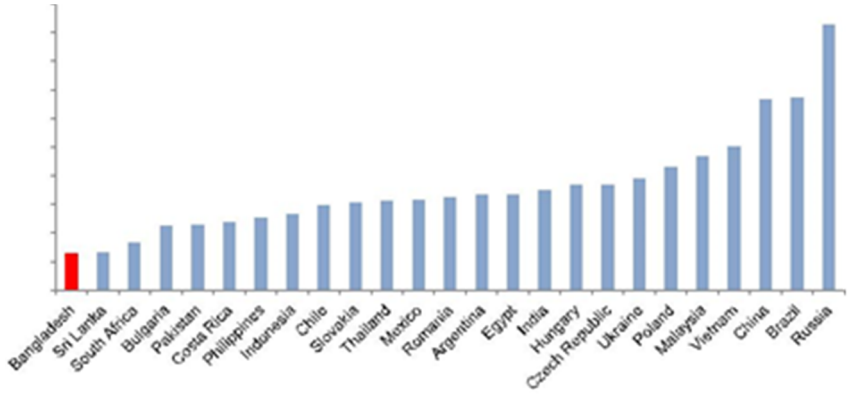


Figure 9
Average office rental cost in CBD
Source : Cushman & Wakefield Research, Office Space around the world 2011, KPMG Analysis
All values in USD/sq ft per annum

Telecom Infrastructure

Extensive fiber optics network spans across the country providing robust network infrastructure, and connectivity to the second tier cities within Bangladesh. In 2006 Bangladesh got connected to the SEA-ME-WE 4 Submarine cable. The capacity of 7.5 GBPS (Early 2008) was augmented to over 142 GBPS in late 2011.The inland connectivity between Cox's Bazaar and Dhaka and onwards has been developed along multiple links to foster redundancies. Bangladesh has over 82 million telecom service subscribers5 (the teledensity of almost 50% is much higher than other developing countries). Also, there is over 10 million internet users. A population of over 750,000 computer savvy users is a big plus for Bangladesh IT/ITeS industry. As on October 2011, there are 2 nationwide telecom transmission provider (providing inland redundancy), 29 IP Telephony providers and 46 Internet service providers licensed to operate within Bangladesh. These numbers reflect a growing and matured market for telecom services within Bangladesh. The growth of IT/ITeS industry within Bangladesh has led to development of Technology parks within Dhaka and surrounding areas. These technology parks provide a ready infrastructure for an IT/ITeS enterprise to start operations with minimum setup time. The IT infrastructure including network, connectivity, telecom and power backups are provided here. The IT park at Janata Tower at Central Dhaka is already operational, while a larger High-Tech Park is under development by global infrastructure players in Kaliakoir, Gazipur – a short distance away from Dhaka.

The Government Support – Digital Bangladesh

As part of ICT development, the current government has taken an initiative to make 'Digital Bangladesh' by 2021 in which Bangladesh will reach a trajectory of high-performing growth supported by technology. In response to the initiative, Information technology usage for governmental reform and citizen centric service delivery in Bangladesh has been growing in recent years.

ICT Capacity Building

The government is promoting the use of ICT enabled education and has invested a lot in training over 50,000 school teachers, who then use ICT in their pedagogical methods. English resource centers have been set up with the support of the British Council to hone the language skills of the population. Over 100 of these centers are being set up in the first stage. The government has established an ICT incubator in Dhaka to patronize activities of the software and ICT based industries. As many as 48 different organizations are presently developing and exporting software at this incubator where it has received about USD 5 million of investment and generated employment for 1700 IT professionals. The first software technology park at Karwan Bazaar, Dhaka is already operational. In addition, the government has a plan to establish High-Tech Park at Kaliakoir, Gazipur – a short distance away from capital Dhaka - for establishing ICT, engineering, electronics, telecommunication, biotechnology and other related knowledge based industry.

As an initiative to develop human resource in ICT sector, the government was undertaken a program name National ICT Internship which is still continuing. The goal of this program is to develop professional capability of computer workers in ICT. This program was undertaken, basically, to provide support and employment to software and ITES industry. 60 percent of salary costs of the interns is paid by the Government. The rest 40 percent is borne by the respective agencies. Also steps have been taken to impart extensive training to government officials, teachers and others in 6 divisional regional training centers of Bangladesh Computer Council. One of the key initiatives run in the country is 'Own your Laptop' scheme – where university students are supported to undertake freelance projects to pay for the laptops loaned by the government.

Enhanced Connectivity

As connectivity is the single most important facility among all the infrastructures needed for ICT development, the government has taken a range of actions to achieve certain specific objectives. The internet has grown quickly in Bangladesh in the last few years. Broadband internet is in its infancy, but the country has started moving into WiMAX services in a significant fashion and all the upazillas are now under mobile internet coverage. To promote ICT usage in everyday service delivery - the government is looking at providing banking services and micro insurance solutions through mobile phones. Broadband internet costs have come down by over 70% in the past 3 years. Over 4000 km of OFC network has been laid to create the 'National Transmission Network'. At present, Bangladesh only has a single submarine cable. In view of the future bandwidth demand and uninterrupted international communication, steps have been taken to connect Bangladesh to the second submarine cable, and 3-6 terrestrial links through neighboring countries, the first of which would be commercially available during first half of 2012.

Taxation Support

Bangladesh offers one of the most liberal tax policy regime for IT/ITeS exporters – currently, all income from IT/ITeS is tax exempted. For tax exemption purpose ITES means Digital Content Development & Management, GIS, IT Support & Software Maintenance Services, Web Site Services, BPO, Data Entry, Data Processing, Call Centre, Graphics Design, Search Engine Optimization, Web Listing, E-Commerce & Online Shopping and Document Conversion, Imaging & Archiving.

Legal Framework for ICT Development

The IT Act in Bangladesh was modified to accommodate more stringent recourse for IPR protection and curbing software piracy. The government has taken several initiatives on e-Commerce to create an environment for ICT based trade and commerce. Controller of Certifying Authority (CCA) has started functioning for the purpose of introducing digital signature with a view to introducing e-Transaction, e-Commerce and e-Procurement. So far six organizations have been authorized for this purpose. Automated Clearing House has been introduced in Bangladesh Bank- resulting in quick clearing of the checks.

The government has also taken several initiatives on e-Citizen process so that majority of the people can obtain information and services related to their lives and livelihood by using technology. With a view to ensuring delivery of e-services at the Union level, as many as 4501 Union Information and Service Centers (UISC) have started functioning in coordination with Local Government Division. UISC is able to bring various types of information to the doorstep of citizens in rural areas. It helps service providers and users to save time, cost and has made operations hassle free. Recently, the government has also introduced District e-Service Centre (DESC) to improve the accessibility and transparency of public service delivery system at the district (administrative unit) level. The government is attempting to provide the right institutional and development support to make the Bangladesh IT/ITeS industry more competitive, and the incumbent players in the IT industry in Bangladesh are poised to build upon this in the coming times.

Challenges to Tapping the Potential

As one of the most populous young nations, Bangladesh has made great strides in laying the groundwork for a successful outsourcing market. However, there is still a perception in many overseas markets that Bangladesh remains a risky place to do business and that Bangladeshi companies may struggle with sophisticated offshoring tasks.

It is important to recognize and understand the risks that accompany different outsourcing choices and put measures in place to mitigate the threats they pose. If Bangladesh has to leverage its strength to the fullest to become a larger player in the offshoring industry, there are a number of factors that need to be considered.

Intellectual Property Rights

IPR protection is a particularly important issue in outsourcing where vendors have access to sensitive data. Vendors in Bangladesh have adopted strict security measures to prevent customers' intellectual property from falling into wrong hands.

Due to numerous incidences of software piracy in Bangladesh, there is still a negative image of the treatment of IPR. Government efforts to resolve the problem, such as the measures enacted in the new IT Act, would go a long way to reduce piracy. It is also worth noticing that there have been no untoward data or information breach incidents reported from Bangladeshi vendors in the last decade of working with global corporations.

Scale of Offerings

For a client planning to test Bangladesh's capabilities, the task of identifying the right vendors could be daunting. Currently, the market is highly fragmented with hundreds of small vendors vying for market. Opportunities exist for these players to consolidate and gain economies of scale and service expertise to compete for larger contracts. The current market is geared towards small projects with niche offerings, which may not be enough to fulfill the government's vision for a services economy. For commoditized services in BPO and IT outsourcing, the goal of getting big is highly important, but it is less critical in niche areas like Graphic Design and DTP, where many small players vie for work in the global space.

There are multiple small to medium size companies offering services to global clients. These companies however need to scale up to compete for larger offshoring opportunities globally. The government of Bangladesh is proposing to invest a lot in scaling up the IT infrastructure by targeting a 'Digital Bangladesh', which would allow these incumbent players to gain expertise and scale – of operations and executing large projects. In recent times, GrameenPhone IT , Samsung R&D and SouthTech have grown larger in numbers and scale of operations, and there is a need for more companies to grow – organically or inorganically.

This scale, however, also makes the Bangladeshi companies more nimble and flexible to adapt to newer service delivery paradigms like Cloud Computing and VoIP based offerings – and also offer deep domain expertise unlike larger companies with generalist offerings. This scale also offers a more competitive service delivery capability for SME in the developed countries, both from pricing and access to top management perspective.

Infrastructure

Dhaka has the perception of being a city not meant for business – infrastructure is overburdened, and power and bandwidth outside of Dhaka is unreliable. Most of the existing companies have set up their own power backup units; this leaves a lot to be desired.

The government has taken up a slew of measures to decongest Dhaka city, including flyovers, Metro and Monorail projects. Additional power plants are also under construction. These steps would start to fructify in the coming years making

Dhaka’s infrastructure more IT savvy. In the meantime, the government’s steps towards dedicated IT Parks in and around Dhaka would provide the necessary workspaces for the expanding IT/ITeS industry.

Lack of Marketing Prowess

One of the major reasons for the IT/ITeS vendors having limited growth is the lack of branding and marketing. Most vendors have grown in the existing client contracts, but have shown limited success in signing up new clients.

It is thus difficult for a multinational sourcing manager to find many Bangladeshi vendors offering services readily. The marketing function of most Bangladeshi enterprises is handled by

NRB (Nonresident Bangladeshis) or the parent company of the captive. Limited market presence has overshadowed the advantages that the Bangladeshi vendors have to offer in terms of skills and costs.

Bangladesh also has a gap in middle management knowledge which is perceived to be growing, and is also at the root of limited scale. Bangladesh would have to fill in this management skill gap by keeping management roles with European or North American partners or clients, or bringing in Specialist expertise from overseas – including among the Diaspora. This has implications for cost; however these skills are required to make Bangladesh outsourcing industry a success.

Negative Perception and the Role of Government

Bangladesh suffers from a negative perception regarding poverty, corruption and being prone to natural disasters. While it is impossible to ignore the history of natural disasters, it may be noted that IT/ITeS industry in Bangladesh is clustered around the capital Dhaka, which is an inland city and where 'Business as usual' prevails. There are also doubts regarding the business climate and infrastructure in Bangladesh. The IT/ITeS industry may work towards alleviating these perceptions; however the government needs to step in here. Brand Bangladesh needs to be promoted. There is a case for the government to take a holistic approach to developing the IT/ITeS industry. Some of the successful cases are India, where IT/ITeS services are offered market friendly labour laws, and single window clearances for investments; and Egypt – where the government promoted '1 vision, 1 Ministry, 1 Industry focal point'. China also worked on a centrally monitored '1000-100-10' plan to set up 10 cities with over 1000 companies for IT/ITeS by offering them incentives. Bangladesh too needs to look at simplifying the legal framework to complement an 'outsourced' industry – right from investment climate, taxations, investments, remittances and flexible working hours.

Conclusion

The enterprises evaluating outsourcing destinations base their decisions on a number of factors – especially across quality of services and cost of services. The emphasis on one of these factors, as also a subhead of these factors (availability of language skills being important for voice based process, while technical skills are important for software based tasks) allows a buyer to evaluate across destinations.

Bangladesh has abundant supply of qualified manpower at significantly low costs. The quality of physical infrastructure is poor compared to some other destinations but the significantly low cost of infrastructure makes it attractive for operations.

Internet costs are higher compared to many countries, but the cost of internet and a backup through VSAT (the cost may reduce greatly after the alternate lines are in place, and competition is fostered) is far offsetted by the cost of resources. As the scale of operations increases, Bangladesh's competitive cost advantage gets further enhanced. The graphic below indicates the cost arbitrage Bangladesh offers for a small software development center with 25 people.

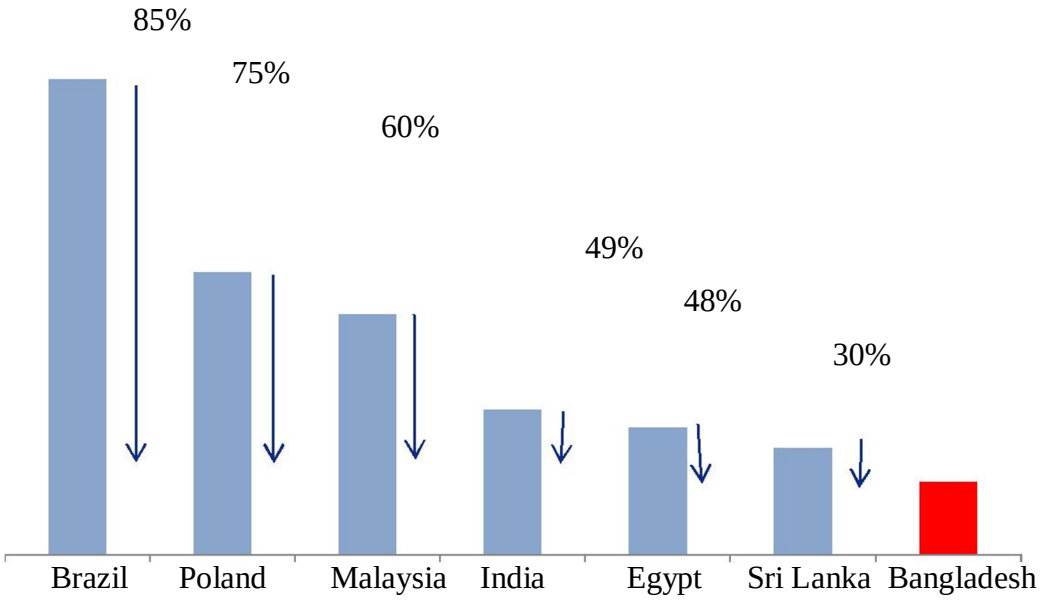


Figure 10

Savings on Illustrative cost of a 25 center development center

Source : Payscale Database, Sourcing line Database, ITU Database, Cushman & Wakefield Research, Office Space around the world 2011, KPMG Analysis

Costs include salary cost, internet costs, office rentals and SGA costs

The lack of scale of operations significantly reduces the ability of Bangladesh IT/ITeS sector to target large deals. Also, with the more mature outsourcing destinations offering more than just BPO operations –providing transformation and optimization of operations in long duration deals, the current industry in Bangladesh could be evaluated for outsourcing of jobs with low value add in the near future, till the industry and its players mature. Graphic design, Desktop publishing and mobile/web development tasks have a relatively mature market in Bangladesh, and given the high cost arbitrage – could be outsourced with relative ease. Bangladesh may also be a strong competitor in the voice based processes – subject to the redundant bandwidth becoming a reality in near future.

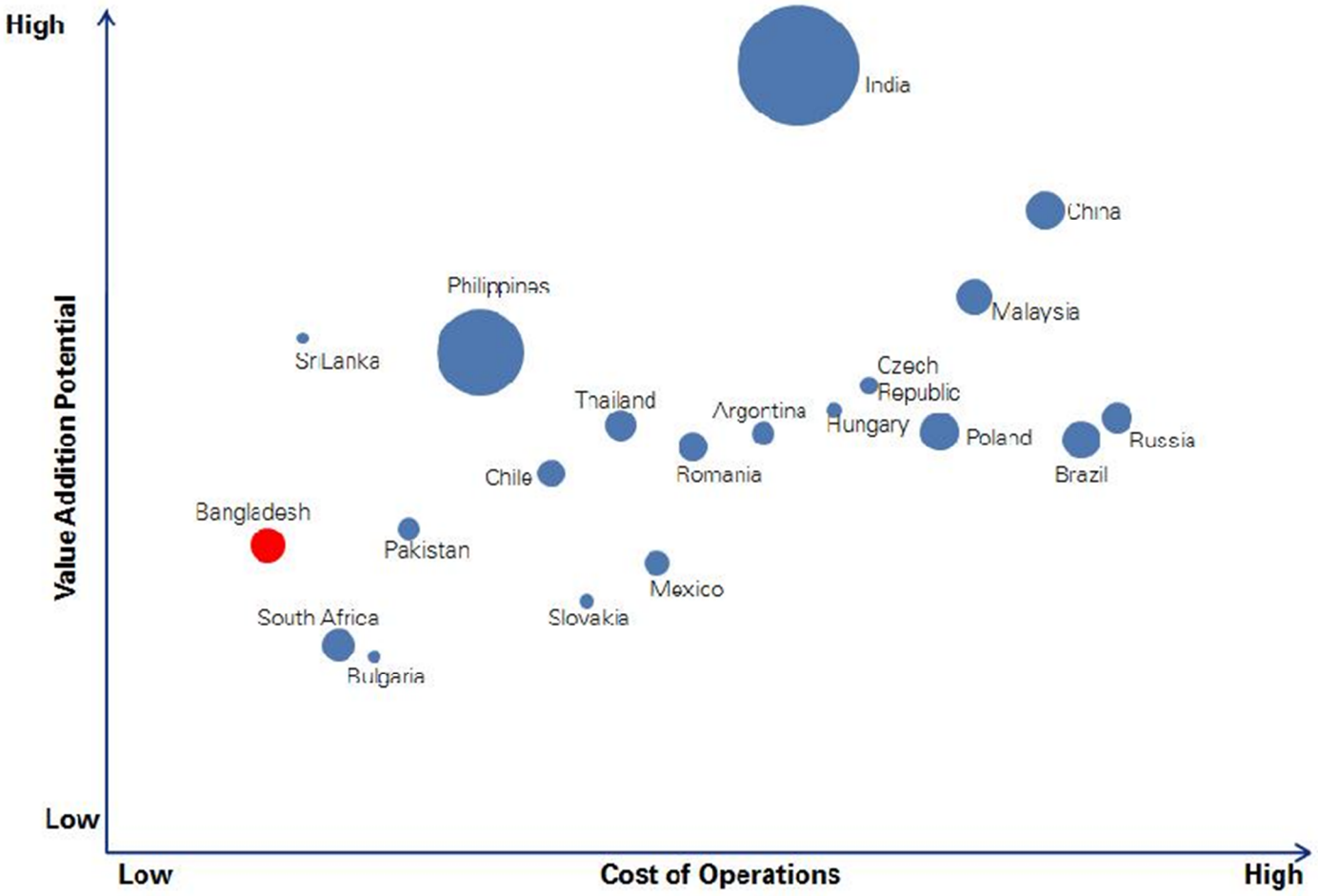


Figure 11
Comparing Global outsourcing destinations
Source : Payscale Database, Sourcing line Database, ITU Database, WEF Global Competitiveness Report, 2011-12 Cushman & Wakefield Research, Office Space around the world 2011, KPMG Analysis

A ‘Cloud Computing’ paradigm is emerging - with applications being developed and distributed over a cloud for Smartphone and tablets. The low unit cost of such products is leading to development of low cost service factories, and is also reshaping the way trade in IT services is being happening globally. As a result, the global outsourcing marketplace is suddenly more accessible to smaller enterprise and the freelancer. Dhaka’s freelancers and SME players have been creating applications and providing support and modifications for vendors listed on Apple iApps and Android Marketplace. This is set to grow further as SME in Bangladesh venture globally to serve global clients using the cloud environment over data networks with lower infrastructure requirements.

Bangladesh has been slowly marking its presence in global outsourcing marketplace. With focused investments from government in enabling business environment and developing an IT economy, Bangladesh would continue to emerge as a favorable destination for information technology and business process outsourcing.

A nascent industry driven by entrepreneurial youth make the most of government initiatives aimed at promoting a 'Digital Bangladesh'. As its vision for Digital Bangladesh, the government plans to develop a robust IT enabled economy with technology enabled service delivery systems and a population which is technology savvy.

Bangladesh currently is digging its heels in the low value addition IT outsourcing space by serving companies in Europe, US and South East Asia. The domestic market is poised for growth to support the government initiative of a digital economy, allowing the existing companies to gain scale and expertise in large project execution and services delivery. This would allow Bangladeshi companies to move up the value chain, offering the benefit of operating cost arbitrage to a broader set of services and clients. In the global marketplace for outsourcing destinations, Bangladesh has positioned itself as a key location for consideration, by enhancing skill availability, investments in infrastructure development, making focused investments, attempting to address IPR concerns and creating success stories.

Future success comes with its own challenges and risks. This paper outlines many of these risks, and also makes clear that a sustainable competitive advantage could be achieved by those who understand and manage those risks effectively.

All of these factors combine to make Bangladesh an interesting place to watch in the global outsourcing market and the most lucrative option for Limelight Networks, Inc.

Case Studies

Case Study# 1 Freelance Outsourcing in Bangladesh

21 year old Mahmud Hasan (name changed on request) wanted to become an entrepreneur someday. A student of Dhaka University, and hailing from a working class family – this always seemed to be a distant dream. In the third year of engineering, his seniors told him about the phenomenon of freelance outsourcing on the University Campus. A profile of his on one of the freelance sites, and Mahmud was in Business – the first project for website design took 3 days and fetched a neat USD100 (Close to BDT 7000 – almost one fourth of his University fee for a year!) The year later, he declined a lucrative campus placement offer, and instead decided to go full time into freelancing. Today, after 3 years, Mahmud has hired 4 college students working part time out of flat in Tejgaon in Dhaka, bidding for work on freelance websites like oDesk, eLance, Guru and others – clocking upwards of USD 20000 a year. He intends to scale this up further, planning to hire fresh engineers in the coming year on full time basis. “Getting money from clients is a difficulty and takes time, retail internet connection is unreliable, and a lot of software is pirated” quips Mahmud “but now I plan to get a business internet connection which will cost more but more reliable, and I will get more billing with licensed software since I have many referencible clients on freelance websites”

What started as a quest for extra money and gaining work experience, freelancing by students and professionals has turned into a fledgling industry in Dhaka and elsewhere in Bangladesh. In the absence of any large software companies in Bangladesh, skilled young professionals are seeking out alternative methods to leverage their proficiency in order to make some money. This has led to a thriving software freelancing community in Bangladesh. Even without any marketing or corporate backing, nearly 10,000 freelancers from Bangladesh billed over USD 7 million in 2010, catapulting the country to the seventh position among freelance worker nations, and Dhaka- the capital city, to the top 5 cities for freelance outsourcing work.

The rapid growth in Bangladesh’s freelancing community can be attributed to ease of setting up operations – limited infrastructure needs and an internet connection. A combination of good English skills and low labour costs has made Dhaka a top destination for freelance outsourcing jobs, which typically include editing, proof reading, translation, data entry, web research, virtual assistance, web design and software programming. Many of the workers are students of Engineering and Technology Universities supplementing their allowances. Many non-engineering

students are employed in data entry projects, earning close to USD1000 per month depending on the complexity of the assignment and experience levels. Although the contribution from freelancers may seem small in isolation, their aggregated contribution in employment generation and export income are not insignificant.

Despite the stronghold of freelancing in Bangladesh, challenges remain in terms of high-speed internet facilities, cheap bandwidth, newly introduced taxation and online payment facilities. Paypal, for instance, is not supported in Bangladesh. In addition, these young IT professionals/entrepreneurs need to be guided in terms of business development, investment planning and organizational capability to contribute more meaningfully to the country's software industry. But despite these challenges, in a world grappling with global recession, freelancing is increasingly being considered a viable alternative to traditional modes of outsourcing by clients keen on cutting costs. If the recent reports from oDesk and eLance are any indication - Bangladesh seems well poised to make the best of this opportunity.

Case Study# 2 Samsung R&D Centre, Bangladesh

Samsung is the global leader in Consumer Electronics, mobile phones and imaging technologies. With over 220 billion USD of sales in 2010 and 344,000 employees globally – Samsung is the 2nd most admired electronics company on the planet.

Samsung has a strong local presence in Bangladesh in the mobile phones and consumer electronics space. With a strong market knowledge and local expertise - Samsung decided to set up a global software R&D center in Dhaka, Bangladesh in early 2010. This was one of the 3 new R&D centers opened by it globally in the year– the other 2 being in China. The center started operations in August 2010 – and delivered its first projects beginning 2011. Focusing on mobile phone technologies and feature phones, the center has scaled up to a headcount of over 250 engineers in less than a year. "The cost of hiring an experienced IT engineer in Bangladesh is around one tenth of that in a developed country like US" said Joseph Seungbyoung Oh, VP at Samsung Bangladesh R&D Center. Many engineers have been to the parent plant at Korea for training, and are successfully working on projects in Bangladesh now.

"Most hires are technically sound, we have to invest in bringing them to speed on corporate work culture." quips Joseph Oh. Big enterprise experience is something new for local resources – as a result - attrition, too, is much lower in Dhaka than other centers. Having delivered projects successfully, Samsung R&D Bangladesh is aiming to scale up further to over 1000+ resources, to serve the African and Mid-east markets.

Case Study# 3 GraphicPeople

Bengali people lay a lot of emphasis on arts. Graphic people – a 160 people company – in Banani in Dhaka has combined this penchant for arts with IT skills to build one of the largest IT/ITeS outsourcer (by revenue) in Bangladesh. GraphicPeople is growing fast due to the outsourcing of graphical assignments. Offering services from Dhaka, Bangladesh for one-fifth of the European market price - Revenue, the client portfolio, and the number of employees have been rising steadily.

GraphicPeople was founded in collaboration with DANIDA in 2004, which has supported the project through the B2B program. The goals of the B2B program include ensuring that knowledge, know-how, and technology are transferred to the developing country's private companies through partnerships with Danish companies. With demonstrated success, it is now part of the world's largest agency network WPP.

GraphicPeople collaborates with large, international companies such as Dell, INTERSPORT and Flügger concerning desk top publishing and development of web/digital contents of commercials, product catalogues and packing-related materials. Graphic People receive the text, photos and instructions for the catalogues from its clients and then fit the text and photos into a template. The template has been developed to cope with the different European languages, so the fact that the DTP artist cannot understand the text is not important.

"The cost of bandwidth is high compared to other competing locations, especially considering the VSAT backup, but this would drastically reduce once the backup terrestrial and sub-sea lines are in place" says Imtiaz Ilahi, Managing Director of Graphicpeople.

Imtiaz points to failures in infrastructure as a major hurdle, be it unreliable internet connections or power supplies. These mean his company has to pay heavily to provide backup solutions. "Our basic advantage is cost. Desktop publishing is very man hour intensive and it was becoming increasingly expensive to do in Europe. To do the work in Bangladesh costs less than 20 percent of the price in Europe, and we are around 30 percent cheaper than India," Imtiaz said "But it is not just price that keeps the clients happy, it's also about quality – and we have been able to demonstrate the results". A walk around the Graphic people office – and one sees the glimpses of a European corporate setup – complete with enthusiastic staff and cabin less office. The print and digital production company was also adjudged the best IT employer in Bangladesh in 2010.