SWOT ANALYSIS of LOCAL JOB IN SOFTWARE AND IT INDUSTRY IN BANGLADESH

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2020

Abstract

SWOT analysis (or SWOT matrix) is a strategic planning technique used to help a person or organization identify strengths, weaknesses, opportunities, and threats related to business competition or project planning.

This technique, which operates by 'peeling back layers of the company is designed for use in the preliminary stages of decision-making processes and can be used as a tool for evaluation of the strategic position of organizations of many kinds (for-profit enterprises, local and national governments, NGOs, etc.). It is intended to specify the objectives of the business venture or project and identify the internal and external factors that are favorable and unfavorable to achieving those objectives. Users of a SWOT analysis often ask and answer questions to generate meaningful information for each category to make the tool useful and identify their competitive advantage.

In this report, The SWAT analysis was represented based on local job in software and IT industry in Bangladesh.

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Chapter 1

Introduction

Thousands of years ago at the dawn of human civilization, agricultural society evolved from the plough. In the second half of the eighteenth century, with the advent of the steam engine the industrial revolution took place in Europe. Now at the dawn of the new millennium another revolution of entirely different kind is taking place across the globea silent revolution. No wonder that the present age is being called the ICT age. The term Information and Communication Technology (ICT) facilitates the process of identification, collection, storing, processing and disseminating of information. It encompasses the broad fields of data processing, transmission and communication by means of computer and telecommunication techniques and these modern tools are being increasingly used for personal and organizational information processing in all sectors of economy and society. The ICT sector in Bangladesh is still in an infancy stage. All feel that the sector has huge potential. Given that the country has abundant number of inherently talented people who can be trained in IT skills, the ICT industry can play significant role in the development of the nation through employment creation and poverty alleviation.

1.1 Rationale of the Analysis

Information technology has emerged as the most promising industry in the global economy. It has brought fundamental changes to the ways that people communicate with one another, share and manage information, engage in trade and commerce,

and even enjoy their leisure. Its all-encompassing and pervasive nature has made it a catalyst of rapid growth and advancement.

It might be of note that besides opening up new horizons of possibilities, information technology goes a long way in creating a level playing field in the global economic setting. Nations with strong industries in more traditional industries find themselves facing the task of re-learning the golden rules of success in this information age. The opportunity to establish our nation as a player the world market has never been greater.

The United States of America has been on an economic growth surge for nine years on a trot, the longest recorded of economic expansion in its history. A major portion of this can be credited to the nation's pro-active and pioneering role in development of Information Technologies. Our neighbor India has established itself as an IT powerhouse and in through the exports of software related products, has created a multi-billion dollar IT industry.

Bangladesh has not yet seized the opportunities in this field. As others have planned for the future and have started cashing in on the benefits, the IT industry of Bangladesh is still at the rudimentary level in most aspects. At present, both the Government and the private sector are making efforts to make advancements in this sector. However, as time is the most critical factor in the IT age, more a progressive attitude is required to create a Bangladesh that is up to date with the global IT scenario.

Bangladesh has great potentialities for earning crores of dollars in foreign currency by providing ICT-enabled services to the foreign buyers. Bangladesh has a time difference of twelve hours with North America and other main market which makes possible easy delivery of ICT enabled services. Availability of large number of computer trained young people with English base on the one hand and cheap wage of the trained manpower on the other puts, Bangladesh is an advantageous position.

Chapter 2

SWOT Analysis

SWOT stands for Strengths, Weaknesses, Opportunities, and Threats, and so a SWOT Analysis is a technique for assessing these four aspects of your business.

Anyone can use SWOT Analysis to make the most of what they have got, to your organization's best advantage. And they can reduce the chances of failure, by understanding what their lacking, and eliminating hazards that would otherwise catch their unawares.

Better still, they can start to craft a strategy that distinguishes them from their competitors, and so compete successfully in their market.

2.1   Method Description

2.1.1   Strengths

Strengths are things that your organization does particularly well, or in a way that distinguishes you from your competitors. Think about the advantages your organization has over other organizations. These might be the motivation of your staff, access to certain materials, or a strong set of manufacturing processes.

Your strengths are an integral part of your organization, so think about what makes it "tick." What do you do better than anyone else? What values drive your business? What unique or lowest-cost resources can you draw upon that others can't? Identify

Figure 2.1: A Basis SWOT Analysis Matrix

and analyze your organization's Unique Selling Proposition (USP), and add this to the Strengths section.

Then turn your perspective around and ask yourself what your competitors might see as your strengths. What factors mean that you get the sale ahead of them?

Remember, any aspect of your organization is only a strength if it brings you a clear advantage. For example, if all of your competitors provide high-quality products, then a high-quality production process is not a strength in your market: it's a necessity.

2.1.2 Weaknesses

Now it's time to consider your organization's weaknesses. Be honest! A SWOT Analysis will only be valuable if you gather all the information you need. So, it's best to be realistic now, and face any unpleasant truths as soon as possible.

Weaknesses, like strengths, are inherent features of your organization, so focus on

your people, resources, systems, and procedures. Think about what you could improve, and the sorts of practices you should avoid.

Once again, imagine (or find out) how other people in your market see you. Do they notice weaknesses that you tend to be blind to? Take time to examine how and why your competitors are doing better than you. What are you lacking?

2.1.3 Opportunities

Opportunities are openings or chances for something positive to happen, but you'll need to claim them for yourself!

They usually arise from situations outside your organization, and require an eye to what might happen in the future. They might arise as developments in the market you serve, or in the technology you use. Being able to spot and exploit opportunities can make a huge difference to your organization's ability to compete and take the lead in your market.

Think about good opportunities you can spot immediately. These don't need to be game-changers: even small advantages can increase your organization's competitiveness. What interesting market trends are you aware of, large or small, which could have an impact?

You should also watch out for changes in government policy related to your field. And changes in social patterns, population profiles, and lifestyles can all throw up interesting opportunities.

2.1.4 Threats

Threats include anything that can negatively affect your business from the outside, such as supply chain problems, shifts in market requirements, or a shortage of recruits. It's vital to anticipate threats and to take action against them before you become a victim of them and your growth stalls.

Think about the obstacles you face in getting your product to market and selling. You

may notice that quality standards or specifications for your products are changing, and that you'll need to change those products if you're to stay in the lead. Evolving technology is an ever-present threat, as well as an opportunity!

Always consider what your competitors are doing, and whether you should be changing your organization's emphasis to meet the challenge. But remember that what they're doing might not be the right thing for you to do, and avoid copying them without knowing how it will improve your position.

Be sure to explore whether your organization is especially exposed to external challenges. Do you have bad debt or cash-flow problems, for example, that could make you vulnerable to even small changes in your market? This is the kind of threat that can seriously damage your business, so be alert.

Chapter 3

SWOT Analysis according to Bangladesh

3.1 Local Job of IT Industry in Bangladesh

In today's world, digital economy influences the way we act in our environment. As part of global community, Bangladesh strives to implement the 2030 Agenda for Sustainable Development where information and communications technologies play a pivotal role for its success,

We observe, the developing economies are now showing capabilities in technological innovations which can spur visible growth at their economies.

This is the era of fourth industrial revolution (IR 4.0). Reportedly, world's top four companies are all closely linked to the digital economy: Apple, Alphabet (Google), Microsoft and Amazon.com. There are also concerns over how data flows can be harnessed while at the same time addressing concerns related to privacy and security of the user and related stakeholders, who are involved at this process. The rapid pace at which the digital economy is evolving is a result of the technologies and innovations that are becoming more pervasive. The evolving digital economy include advanced robotics, artificial intelligence, the Internet of Things (IoT), cloud computing, big data analytics and three dimensional (3D) printing, being drivers of IR 4.0.

The ICT Job Market Survey in Bangladesh, is a timely initiative of DIU as the report addresses diverse factors of matrix of ICT Job Market in Bangladesh. With this survey report, users can easily interact with factors like demography of ICT

employees, current status of recruitment, training, and academic collaboration in ICT sector, nature of involvement among Higher Education Institutes and ICT–based organizations, and demand for hard skills and soft skills. The survey rotates around ICT Employment outlook, where demand for different ICT skills have been stressed. The survey report also discusses the relationship between advancement of emerging technology (especially fourth industrial revolution aspect) with employability in ICT and non-ICT sector.

Type of Business

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Years in Service

Years in service of ICT and Non-ICT industries) shows the percentage of the companies based on the time of establishment. This indicates that most of the ICT companies in our sample (43.8%) were established more than 10 years ago. For the non-ICT companies, this frequency is 41.5%. Sixty-six per cent (66%) of all the ICT businesses in our sample have less than 26 employees, 24% of them have 26–50 employees, 8% of them have 150 employees, and the remaining 2% have 100–150 employees.

his section covers the male–female ratio, age, and education level of ICT profession-

als. Data from the job market survey shows that 84female employees is almost 5:1. Most of the ICT workers (61.22whereas 15.56of them are aged 40 years or more, and 1.75Figure 2. Gender Frequency and Age Figure 3. Educational Qualification of ICT employees 26 Both the ICT and non-ICT organizations report that 44.31% of their ICT employees have completed graduation (Figure 3). Among the rest, 37.79% holds post-graduate degree, 11.03% holds diploma, 4.24% have completed the HSC exam, and 1.2% holds PhD degree. As much as 1.44% of the employees have only secondary grade qualification. This section covers the male–female ratio, age, and education level of ICT professionals. Data from the job market survey shows that 84% of ICT professionals were male and 16% female. The ratio between male and female employees is almost 5:1. Most of the ICT workers (61.22%) are aged between 25 and 35 years whereas 15.56% represents age cluster between 21 and 25 years, 11.7% between 36 and 40 years, 10.31% of them are aged 40 years or more, and 1.75% are aged less than 21 years.

	ICT	NON ICT
Less than 1 year	11.2%	3.7%
1-3 years	12.7%	14.6%
4 –6 years	22.7%	15.9%
7-9 years	20.7%	24.4%
10 years and more	43.8%	41.5%

Figure 3.1: Years in Service in ICT and NON-ICT Industry

3.2 SWAT Analysis of Local Job in Software and IT Industry

3.2.1 Strengths

Bangladesh ICT sector has the potential to become a global destination for off-shoring. The summary of the main strength points are given below:

- The biggest strength in Bangladesh is the young population that we have. They can be trained easily and fit in the sector needs. As a result of a decent education system, the average level of technical knowledge is surprisingly.

- In addition to the talented workforce, Bangladeshi ICT companies are very flexible in acquiring additional workforce if a project scales up.

- The technical knowledge of the Bangladeshi workforce is considerably high.

- Bangladeshi companies are rather flexible in scaling up the workforce when needed.

- Costs in Bangladesh are approximately 40 percent lower than in India and Philippines.

- Due to the large population the wages are still very competitive. Bangladesh is even cheaper than competing countries such as Sri Lanka and Philippines.

- Employee readiness to work and lower costs are the ultimate beauty of the Bangladesh market.

3.2.2 Weaknesses

As a developing market Bangladesh has a fair set of weaknesses. Most of them come from lack of skills, know-how and investment in the country. The main weaknesses are given below:

- The main weakness of the Bangladeshi market remains infrastructure and power shortages.

- The Bangladeshi ICT sector also suffers from poor international visibility and lack of brand name as a global off-shoring destination.

- The ICT sector in Bangladesh is comprised of mainly small ICT companies that currently seem to lack focus and scale to take up large long-term projects.

- Scalability is an issue as 90 percent of the companies have 10-30 employees.

- The companies in Bangladesh do not manage to create a unique sales proposition. They all offer a wide range of products and services. 80 percent of the companies in Bangladesh are offering the same services. Whereas the technical work can be done, the long term service is not very reliable because of the size of the companies.

- There is large lack of soft skills in Bangladesh.

- Sometimes there is a gap between the industry needs and the IT graduates. To solve the problem, companies need to offer trainings and internships for post-graduates.

- speed of internet and availability of broadband connection is also consider as a great weakness of it industry of Bangladesh.

SI	Area of Job Function	Fresh		1-3 years		More than 03 Years	
		Min	Max	Min	Max	Min	Max
1.	Database Administrator	8,000	85,000	12,000	300,000	25,000	600,000
2.	Digital Media or Animator	5,000	50,000	10,000	70,000	15,000	150,000
3.	Business Analyst	7,000	250,000	10,000	60,000	18,000	500,000
4.	Programming	5,000	50,000	10,000	100,000	15,000	250,000
5.	Project Management	10,000	45,000	15,000	100,000	15,000	200,000
6.	Software Quality and Testing	5,000	40,000	10,000	70,000	15,000	200,000
7.	IT Sales and Marketing	4,000	80,000	7,000	60,000	11,000	150,000
8.	Technical Support	5,000	45,000	10,000	70,000	12,000	150,000
9.	Technical Writing	4,000	50,000	9,000	65,000	12,000	100,000
10.	Web Development	7,000	50,000	10,000	70,000	16,000	200,000
11.	IT Management	7,000	50,000	10,000	80,000	15,000	200,000
12.	Solution and Architect	10,000	50,000	15,000	150,000	30,000	300,000
13.	IT Research and Development	6,000	100,000	12,000	100,000	10,000	200,000

Figure 3.2: Salary Analysis

3.2.3 Opportunities

Almost one third of the population is involved in informal jobs, the ILO report says. Out of the country's 637 million strong labor force, only a small portion of workers are in formal sectors. The high incidence of informality continues to undermine the prospects of further reducing working poverty, especially in South

and South-Eastern Asia. Indeed, informality affects around 90% of all workers in India, Bangladesh, Cambodia and Nepal, the report said. Such a high incidence of informality is only partially driven by the high shares of employment in agriculture. In fact, informality in these countries also remains pervasive in the non-agricultural sectors, such as construction, wholesale and retail trade, and accommodation and food service industries, it said. As per the report, unemployment rate in Bangladesh was 4.4% in 2017, which will remain same in the current year. The report also shows that, in 2017, the global unemployed population was 192.7 million, which is expected to come down to 192.3 million.

As Asia-Pacific continues to create jobs at a very fast rate, unemployment in the region is expected to remain low by international standards, at around 4.2% in 2018, said the report. The report also projected that the number of employed persons in the region will grow by some 23 million or 1.2% between 2017 and 2019. Southern Asia, driven by fast labour force growth, is expected to account for almost 90% of the regional employment growth.

The incidence of working poverty in the Asia-Pacific region is expected to continue its downward trend for the next couple of years. As of 2017, 23.4% of the region's working population was in extreme or moderate poverty, living on an income of below US$3.10 per day, down from over 44% in 2007. Despite remarkable progresses, working poverty remains high in some parts of the region, notably in Southern Asia. Over 41% of workers in this region are estimated to be in either extreme or moderate poverty in 2017, accountable for more than two thirds of all working poor in the Asia-Pacific.

3.2.4 Threats

The UGC Annual Report 2016, states that 34 public universities, and 95 private universities excluding the colleges affiliated with the National University, Open University and Islamic Arabic University, are providing tertiary education to some 601,241 students. According to the report, 125,131 students have been enrolled under arts

and humanities and social science disciplines, 150,577 students under science, 12,627 students under pharmacy, 10,300 students under medical, 24,188 under agriculture, 152,214 under engineering and technical disciplines, 147,714 students under business studies, 4,650 students under education, 31,222 students under law, and 15,806 students under diploma/certificate programmes and other courses.

Many foreigners are currently working in different multinational companies, readymade garment companies, and pharmaceutical companies or in other economic sectors in Bangladesh. Home Minister Asaduzzaman Khan Kamal gave an account in the parliament back in February 2018 of how many foreigners work in Bangladesh. According to his estimates, some 85,486 foreigners work in the country and around half of them are Indians (Prothom Alo, April 17, 2018).

Foreigners mainly work in the production management of factories, management of machinery, quality control and mid-level management of organizations. Many foreigners also work in merchandising and buying houses of the readymade garment sector. Besides, they work in the technical and product manufacturing process in export processing zones. Along with this, foreigners are sometimes hired for the post of managing director and director of major MNCs in Bangladesh. According to a recent study by the Centre for Policy Dialogue (CPD), foreigners are working in 24 percent of garment factories in the country. More than 70 percent of managerial posts of organizations in the plastic industry have been given to foreign nationals. RMG, foreign remittance, and agriculture are considered key sectors of the economy. All three sectors more or less hinge on unskilled and semi-skilled manpower. Experts and economists have already begun to sound alarms about China's massive investments in capacity building and infrastructure development projects integrating RMG industries in African countries which may create challenges for Bangladesh's RMG in the near future. Moreover, the economic consequences of the Arab Spring have already proved to be one of the biggest threats to the country's international remittance share. At a time when the country is facing a certain level of "credential inflation" (devaluation of educational or academic credentials over time and a corresponding

decrease in the expected advantage for a degree-holder in the job market) in arts, humanities, social sciences, business studies, and other disciplines, sectors such as RMG, plastic, manufacturing industries, medical, education, ICT and development lack skilled human resources.

In today's world, the role of universities cannot only be limited to imparting knowledge but it must also introduce job-oriented curricula and skills-based training in order for students to be successful in their careers. Traditional graduation programmes should prepare young people for the job market—both in Bangladesh and abroad.

SI	Area of Job Function	Fresh		1-3 years		More than 03 Years	
		Min	Max	Min	Max	Min	Max
1.	Database Administrator	8,000	85,000	12,000	300,000	25,000	600,000
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11.	IT Management	7,000	50,000	10,000	80,000	15,000	200,000
12.	Solution and Architect	10,000	50,000	15,000	150,000	30,000	300,000
13.	IT Research and Development	6,000	100,000	12,000	100,000	10,000	200,000

Figure 3.3: Skills Outlooks

Chapter 4

Conclusions

We stand on the edge of a technological revolution that will fundamentally alter the way we live, work, and relate to one another. In this phenomenon, the transformation will be unlike anything we have experienced before. The rise of fourth industrial revolution, known as Industry 4.0, is an integrated processes of transformation that makes it possible to gather and analyze data across machines, enabling faster, more flexible, and more efficient processes to produce higher-quality goods at cheaper. This manufacturing revolution facilitates increasing productivity, shift economics of scale, foster rapid industrial growth, and modify the working patterns of the workforce.

In the era of fourth industrial revolution, while technical skills are becoming more and more specialized, employers look for candidates that have the perfect blend of both soft and technical skills. Hard or technical skills takes ICT professionals far, but some of the most important skills contributing for becoming a successful ICT professional are seemingly unfocused. "Soft" skills, such as the ability to communicate, managing time, presentation, problem solving attributes, domain knowledge, being able to negotiate conflict, concentrating ethics, adopting innovation, work well in teams, are also invaluable to the expansion of ventures, especially at the managerial and executive levels of any organizations and most vital skills required for ICT based organization. Moreover, emphasis has been placed in this report on development of Soft Skills as tasks that involve repetitive work are increasingly being replaced by growing and emerging technical fields. As reported, Soft-skills of humans are

becoming more and more important as these are skills that computers are not capable of doing.

This SWOT analysis helps anyone to build on what he/she do well, to address what they lacking, to minimize risks, and to take the greatest possible advantage of chances for success of local job in software and IT industry in Bangladesh .