Report On

Current growth of internet subscribers in Bangladesh and its benefit towards our economy: a study on Premium Connectivity ltd. (PCL)

By

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An internship report submitted to the graduate school of management in partial fulfillment of the requirements for the degree of Masters of Business Administration

Graduate School of Management
BRAC University
October 2021

Declaration

It is hereby declared that

1. The internship report submitted is my/our own original work while completing degree at Brac University.

2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.

3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.

4. I have acknowledged all main sources of help.

Student's Full Name & Signature:

Submitted By

_____

Md Rasel
ID : 18264065

Supervisor's Full Name & Signature:

Submitted To

_____

Dr. Sumon Das
Professor, Graduate School of Management
BRAC University

Letter of Transmittal

Dr. Sumon Das

Professor, Graduate School of Management

BRAC University

66 Mohakhali, Dhaka-1212

Subject: Application for submission of Internship Report.

Dear Sir,

I am a student of MBA program of BRAC University. I'm very happy to submit my internship report for your kind evaluation and appreciation. I would be honoured if you go through my report and find it worthwhile as really put in a lot of effort while preparing it. I have immense pleasure to have the opportunity to prepare the report entitled **"Current growth of internet subscribers in Bangladesh and its benefit towards our economy: a study on Premium Connectivity ltd."** Which I completed based on my practical experience from premium connectivity ltd. I have followed all your instructions and tried to submit all the materials.

Please contact me if you have any other questions about the report. I would be delighted to make myself available at your convenience.

Sincerely yours,

_____

Md Rasel

ID: 18264065

Graduate School of Management

BRAC University

Date: October 03, 2021

Non-Disclosure Agreement

This agreement is made and entered into by and between Premium Connectivity Limited and

the undersigned student at BRAC University, Md Rasel, ID#18264065

_____

Md Rasel

ID#18264065

Acknowledgement

I would like to thank everyone who was engaged in the preparation of this report, both directly and indirectly. Without their unconditional support and collaboration, none of this would have been possible.

Dr. Sumon Das, Professor (MBA program) of Graduate School of Management, BRAC University, deserves special thanks for assisting me in completing this internship report on time. His support and guidance helped me in making the right decisions.

I'd like to express my gratitude to Mr. Likhan Bhuiyan, Senior Executive (Finance & Accounts), Premium Connectivity limited, for guiding me through my research. This report would have remained incomplete if he wasn't there with his persistent motivation and advice.

I would like to give thanks to the executives in my Finance and Accounts departments, who provided me much valuable information that was necessary for me to complete this report. I want to mention their names as well such as: Mr. Abul Kalam Azad, Mr. Anwar Shikdar, and Mr. Kairul Alamgir. They were all extremely helpful and supportive. Finally, I would like to give special thanks to the Management of Premium connectivity limited for supporting me throughout the work.

Executive Summary

The world is becoming more and more integrated and interconnected, all thanks to the Internet. In just a few years, the Internet has established itself as a dominant platform that has forever altered the way we do business and interact. The Internet, more than any other form of communication, has given the globe an international or, if you prefer, a "Globalized" dimension. Reaching the other end of the earth is no longer an illusion, but a matter of a few seconds. For millions of people at home, school, and work, the Internet has become the universal source of knowledge. It offers a variety of communications, entertainment, productivity, and lifestyle services and tools that are all meant to be as convenient as possible. Internet platforms are expanding into new service and content categories in order to keep users interested and grow revenues. At the same time, Internet allows entrepreneurs to do things they wouldn't be able to do otherwise, such as access a far broader customer base, resources, and knowledge that no small business could access with its own limited resources or time.

In general, people are becoming more and more dependent on the Internet, and so are businesses and economies around the world. The Internet has become the vitality of entities, and entities can only survive; in order to thrive in this globalized and technologically proficient world, you must have the best connections. For a developing country like Bangladesh, especially when it wants to add the prefix Digital to its name, the situation is no exception. In order to grow and prosper, it must be connected to the rest of the world within its own borders. Unfortunately, Bangladesh still has a lot of room for improvement on the Internet.

Keywords: Premium Connectivity Limited, Porter's 5 forces, SWOT, Internet Service Provider, Internet, Economy, Internet Subscribers

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List of Acronyms

1 TB   1 Terabyte or 1000 Gigabytes

AR-R   Account Receivable Receive

BCC   Bangladesh Computer Council

BFRS   Bangladesh Financial Reporting Standards

BTRC   Bangladesh Telecommunication Regulatory Commission

ERP   Enterprise Resource Planning

FTP   File Transfer Protocol

GPON   Gigabit Ethernet passive optical network

ICT   Information and Communications Technology

IP   Internet Protocol

ISP   Internet Service Provider

MBPs   Megabits per second

MNO   Multinational Organization

MRC   Monthly Recurring Cost

NTTN   Nationwide Telecommunication Transmission Network

OTC   One Time Cost

PCL   Premium Connectivity Limited

PSTN   Public switched telephone network

SEA-ME-

WE   South East Asia–Middle East–Western Europe

VoIP   Voice over Internet Protocol

WIMAX   Worldwide Interoperability for Microwave Access

Glossary

Full Duplex Network   The phrase "full-duplex" refers to data transmission and reception over a single channel at the same time.

Microwave connection   Microwave is a line-of-sight wireless communication technique that employs high-frequency radio waves to transmit and receive speech, video, and data.

MPLs   MPLS (Multiprotocol Label Switching) is a data forwarding technology that speeds up and controls network traffic flow.

Chapter 1: Overview of Internship

1.1 Student Information:

Name: Md Rasel

ID: 18264065

Program: MBA

Major/Specialization: Finance and HRM

1.2 Internship Information:

1.2.1 Period, Company Name, Department/Division, Address

I have carried out my internship for the last three months at Premium connectivity limited. In which first 2 months I worked from home for the pandemic. Finally the last month I worked in office for gain some practical knowledge about working environment.

Period: July 2021 to September 2021

Company Name: Premium Connectivity Limited

Department: Finance & Accounts

Address: Cha-21/2, Uttar Badda, Dhaka 1212, Bangladesh

1.2.2 Internship Company Supervisor's Information:

Name: Likhan Bhuiyan

Position: Senior Executive (Finance & Accounts)

1.2.3 Job Scope

I was appointed as an intern in the finance and accounts department of Premium Connectivity Limited on July 1, 2021. At the beginning of my internship, I only attended the online meetings of the organization's supervisor from home. At first, he assisted me in writing the forwarding letter and the letter of Commitment. In addition, my organizational supervisor helps to understand ERP software and how it works. He also explained to me the work activities of the department. Finally, on September 5, 2021, I joined the office to gain some practical knowledge about business activities. The summary of my duties and responsibilities are given below-

- Making Invoice
- Making Account Receivable Voucher
- Invoice Collection
- Posting to general ledger
- Reconciliation between Organizational ledger and Bank Statements
- Making receivable report
- Making Revenue report
- Writing forwarding letter
- Letter for Bank guaranty and Letter of Commitment

1.3 Internship Outcomes:

1.3.1 Student's contribution to the company

In addition to normal work responsibilities, I also participated in different work processes. I mainly work in the finance and accounting departments. I also work online with the marketing department and human resources department. First of all, I have served as a business letter writer, such as forwarding letters, letter for bank guarantee, etc. Besides, I have assisted in developing new link reports daily basis. I also worked with my manager while reconciliation takes place. In addition, our organization recently takes an initiative to add a payment gateway to our website. I was responsible to make a report about top 5 payment gateway and their services. Finally, SWOT analysis of the company has been done by me. So, I also provide some recommendations to improve the current situations based on my SWOT analysis.

1.3.2 Benefits to the student

At the time of preparing the report, I had a great opportunity to have an in depth knowledge of all the company activities practiced by the Premium Connectivity Ltd. During my Internship, I have developed my write up skills and Interpersonal skills the most. I have improved my communication skills to deal with cross functional teams and senior colleagues. Apart from that, I learned about VELA core ERP software which is developed by the highly professionals of Premium Connectivity ltd. So, the overall my internship program was beneficial for me.

1.3.3 Problems/Difficulties

In order to prepare a well-informed internship report, one needs a lot of information and first-hand experience on such an interesting and timely topic. Due to obligations and privacy

issues, employees of this organization are not allowed to provide or share with me all the necessary information required for the results of the report. Therefore, it is quite difficult to collect the required information during the internship. Due to the limited internship time, it is difficult for me to collect and compile such an internship report within the limited time. However, during the internship, I learned a lot. Besides, it is impossible for me to learn and develop knowledge of all activities and operations of relevant departments.

1.3.4 Recommendations

When working at PCL, I feel that some gaps need to be filled as soon as possible to make the operation run more effectively and efficiently. Therefore, I have some suggestions for future intern students who plan to do internships here. They need a thorough understanding of PCL activities. In addition, there are huge learning opportunities, and future interns need to use this opportunity for their own benefit.

Chapter 2: Organization Part: Overview, Operations and a Strategic Audit

2.1 Introduction

In this competitive world, every student of the business department needs to gain practical knowledge to understand the real business world, which is not possible by theoretical knowledge only. The theoretical knowledge obtained by the books, which is only half of the knowledge matters. Practical knowledge has no alternatives. Therefore the internship program is a great opportunity for every student to gain knowledge about the business organization how things are going on. Master of Business Administration program (MBA) program is a great combination of theoretical and practical knowledge. So, as for completing my master's program, I need to complete my internship. It is a mandatory part of the MBA program of BRAC University. I have got a chance to do my internship at Premium Connectivity limited an Internet Service Providers Company. This report is about my internship with the topic of the Current growth of internet subscribers in Bangladesh and its benefit towards our economy: a study on Premium Connectivity ltd. with the consent of my supervisor. The purpose of this report is to study internet users and acquire practical knowledge of how the Internet supports the growing economy of Bangladesh. This report contains some recommendations as well. So, I think this report will show you the scenario of particular business industry and its support to our economy.

Objectives:

- To know about the Internet Service Providers market of Bangladesh
- To know about the Premium Connectivity limited
- To know about the functional areas of the Premium Connectivity limited
- To analyze organizations position in the ISP market

- To recommend some possible solutions regarding the issues facing by the organization

Methodology

The study is an analysis of the business organization. Basically, it is based on nominal data which were later used to synthesize a list of imperfections in the system. So, most of the information was collected from secondary sources. The primary data was collected through key informant interviews of industry experts and secondary data has been gathered through library and internet research on reports on internet service providers in Bangladesh. Independent research work, publications, articles, and reports were also considered secondary sources for the study. Recommendations were then put forward based on the outcome of the study.

Scope of the study

This portion of the report is based on Premium Connectivity limited. The scope of the study is limited to the Organization level. During the internship period, I had the scope to observe different departments like Finance and Accounts, human resource, and marketing department. As a result of this, I learned different things from different departments. I learned about their Enterprise Resource Planning software. I have also learned about creating invoices, Account receivable vouchers, Account payable vouchers, Receivable reports, Bank Guaranty. Therefore the study for preparing this report was a great opportunity for me to understand the business organization activities.

Limitations

To start with, a period of three months isn't sufficient to cover all the potential breadth of this report. Therefore, there was a time limitations problem. Secondly, there is a global pandemic going on and I couldn't be able to attend the office for two months. Finally, there is very little

information regarding the ISP industry available in the public domain. In the research, I had to face some problems. Such as:

- Survey Time
- Organization don't want to provide all the information

2.2 Overview of the company:

Premium Connectivity Limited (PCL), is a certified ISP-Nationwide operator in Bangladesh. It is one of the many sister concern of NEWTON Group. Under the same banner they have a telecommunication company named Bangla phone limited (BPL) which is the predecessor of Premium Connectivity limited. BPL has their network all over the country as they doing business in Bangladesh since 2004. So, PCL got all the resources of BPL to use. PCL started its operation in 2019. It's a well-organized company with growth. Now they are planning to provide Internet offerings in numerous methods to satisfy the necessities of the customers such as: Full duplex Internet service with dedicated bandwidth, point to point and point to multiple point connectivity. They also have plans for the use of redundant transmission from more than one NTTN throughout the country. PCL desires to set footprints in different telecom arenas. It has the functionality of wearing out the commercial enterprise associated with operating, maintaining, facilitating, and presenting special telecommunication structures and solutions.

PCL currently provides long-haul, mid-haul, forward and backhaul transmission network services. It also provides dedicated lines, Ethernet services, dedicated Internet access and voice communication services. PCL also provides customized complete hosting services to meet the needs of enterprises. They firmly believe in providing reliable and cost-effective transmission networks and other connectivity solutions to meet the needs of its valued customers. It is also committed to providing high quality service at all times.

Services

Data

PCL uses a powerful fiber-optic network to provide high-quality data access over its countrywide MPLS network. It's a dependable, scalable, and adaptable service. Individual customers can continue to use their own IP addressing scheme because the routing domain is virtualized for them. All types of traffic are supported by the very cost-effective integrated network.

Internet Services

Their Internet services are mainly for corporations and small businesses who want a high-quality and premium internet experience. Their fiber optic connections are highly secure and redundant, ensuring high availability and minimal latency.

Internet for Corporate User

PCL's dedicated internet connections provide special deals for business customers. Corporates and SMEs can benefit from high-speed Broadband Internet at a low cost. There are opportunities to get data rates of various granularities with dedicated lines for a low monthly fee.

Internet for Home User

PCL provides home users with high-speed internet connections as well as a variety of value-added services..

- Flexible package
- FTP
- Video Streaming
- Buffer less YouTube

- Movie Time

- Netflix

- Online lag free Gaming

Managed Services

- Domain Registration

- Hosting Solution

- Website Design and Development

- Email Solution

- Website Security

- Power SMS

- IP Phone and many more

2.3 Management Practices at PCL

The management policies and practices are mainly responsible for business development. And provide guidance for any department. Management also responsible for deciding strategies and quality of the service PCL provides. So PCL management combined with different departments. Such as: a) Finance & Accounts b) Human Resource c) Marketing d) Information Technology e) Procurement f) Planning And Development
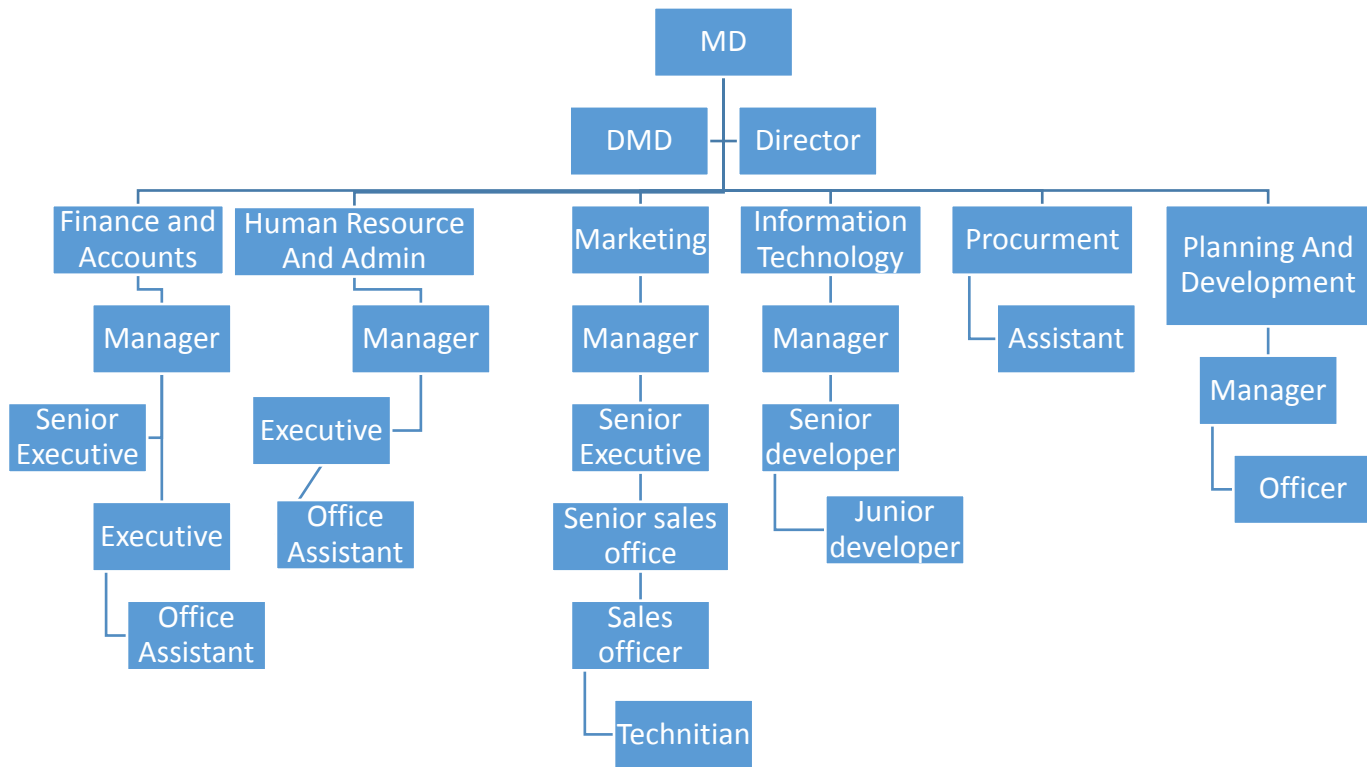
Figure 1: Management Structure (Source: PCL)

The management structure of Premium Connectivity limited has been provided to understand how the organization and its various wings function. At the top of the management is the Managing Director of Premium Connectivity limited. He is in charge of the overall business development of the organization and He takes all the crucial decisions in the organization. Followed by the Managing Director are the position of Deputy Managing Director and Director of the organization. They directly report to the Managing Director about the organizational matters and look after all the departmental functions of the company.

All the departmental heads of the organization directly report to directors. In case of emergency, they also can report directly to the Managing Director. Further down in the line, the Departmental Head of the organization is in charge of all external and internal duties of the company.

The main management practices followed at Premium Connectivity ltd includes

- Developing and implementing best Quality & services to support the organization's strategy and its operational activities.
- Establishing and maintaining the best resources and employees to ensure the best quality service.
- Ensuring well-organized chain of command maintenance to develop a more strong position in the industry.
- Developing and implementing strategies aimed at maximizing Efficiency.

2.4 Marketing Practices at Premium Connectivity limited

PCL maintains a good presence in the social media and internet marketplace. They have a strong sales team who visit every other day in different corporate offices. They also maintain their own website for promotional activities to attract customers. They also have maintained their own Facebook page where they post their updates and activities. Other than that, they post photos of their activities on Instagram. They use the platform to inform new corporate customers and home users.

2.5 Financial Performance & Accounting Practices

The financial calendar that is followed by PCL starts from 1st July and runs till 30th June. The finance and Account department are responsible for prepare and submits the budget of estimated income and expenditure for the following financial year. The Managing Director of the organization approves the budget for the following financial period after consideration of

all the cases and report on the proposed budget. As this is a family-owned organization, at the end of the twelve months, the profit balance is mostly retained in the organization for expanding the business. So, a portion of the profit is retained by the owner to invest in his other business concern. The Finances and Accounts Department of PCL is responsible for analyzing, monitoring, and reporting on the financial position and financial performance of the organization. Finance and Accounts Department prepares reports & key financial statements such as the Annual Financial Report using Bangladesh Financial Reporting Standards (BFRS). It is also responsible for developing and implementing the financial and accounting rules and procedures of PCL. They use their own VELA CORE Enterprise Resource Planning (ERP) system which facilitates compliance with internal and external financial reporting and accounting standards and links with external and internal auditors and other stakeholders on finance and accounting-related issues and concerns.

As they are planning to go public with their group of company within a year or two, they don't allow me to share any of their financial statement. They just allow me to share a picture of their current position. Here it is:
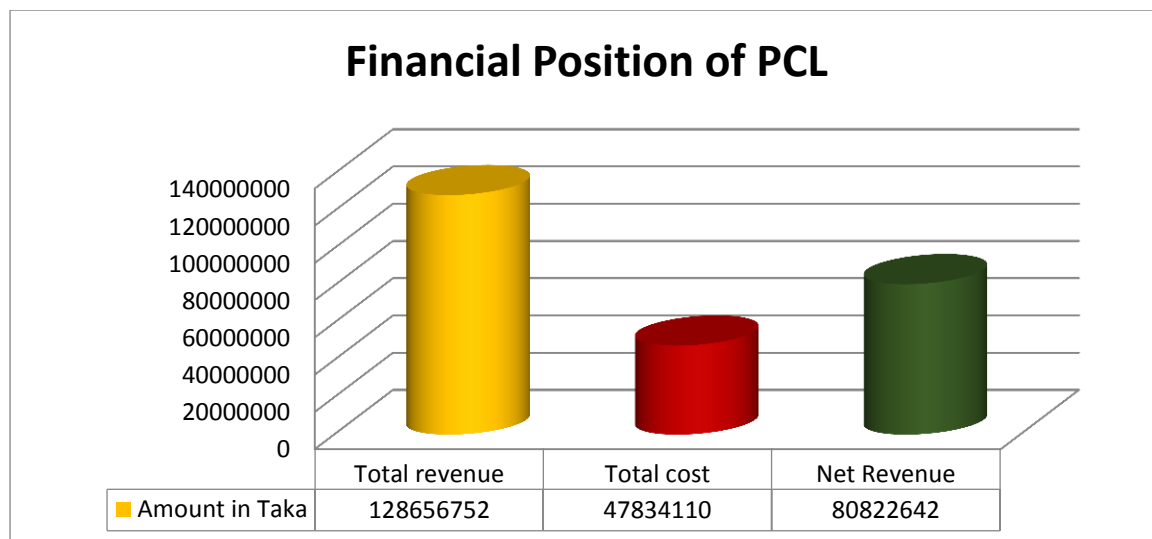
Figure 2: Financial Position on 13th September 2021 from 1st July 2021(Source: PCL)

2.6 Information Technology and Information System Practices

This organization operates a separate IT department. This department is headed by the Head of IT. This department is in charge of all IT activities and provides IT-related facilities to all its staff and employees. PCL has its own ERP system which has been developed by the IT department specifically for the organization. This ERP system is a next-generation ERP that is smart enough to record any sort of organization's accounts. This ERP system is used by the organization in order to create a link or communication with all departments and employees. The information technology department is also in charge of updating the organization's website. They regularly update the Facebook page of the organization.

The IT Department manages the following resources:

- Cloud Service: The cloud-based services and data storage facilities are provided by the organization's IT department to the employees. This is done to provide them access to all the concerns to resources and services round the clock. The employees are able to access these cloud services from anywhere in the world and the employees have a dedicated 1TB of cloud storage space for their professional use.

- Data Center: The data center of the organization is also maintained by the IT department. The Data Center is fitted with automatic fire fighting systems, dual Air-conditioners, servers racks, online UPS, Cisco Routers & Firewalls, Core Switch, Access Switch, etc. All the equipment available in the data center is kept with redundancy backup.

- Server Client System: The IT department is also in charge of the server-client systems of the organization. These servers support the wide computing needs of the staff and employees both on and off the organization..

2.7 Industry and Competitive Analysis

2.7.1 Porter's Five Forces
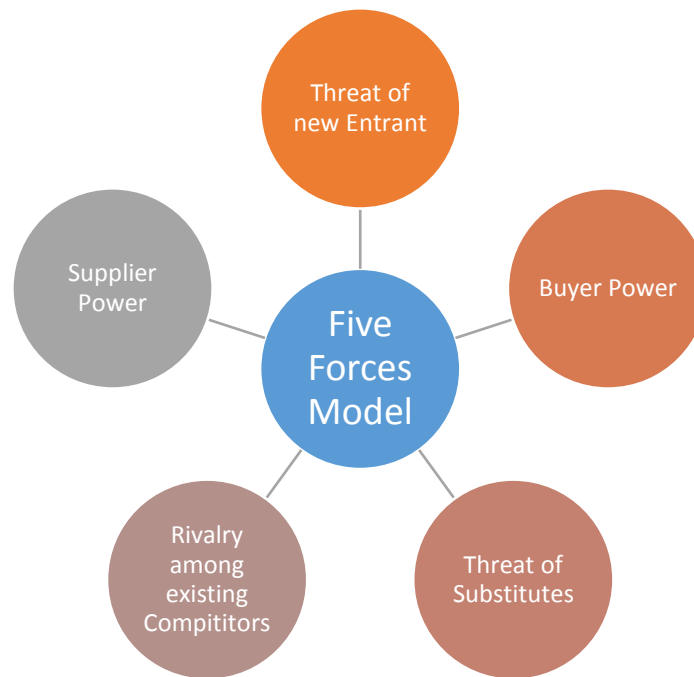
Figure 3: Porter's five forces Model (Source: Harvard Business School)

Rivalry among existing competitors

One of the major impediments to an ISP's entry and expansion in Bangladesh comes from rival ISPs. Currently, there are about 500 ISPs operant in Bangladesh among which 30 ISPs are large enough to be considered competitive enough for PCL. These ISP's compete on the basis of packages and customer service. However, small local ISPs in every neighborhood pose a unique problem for PCL in the sense that they resort to unethical means to curb a new entrants expansion in their particular areas. This can range from using local political backing to even cutting off a competitors internet cables. Thus, rivalry can be said to be quite high in the market.

Threat of substitutes

Threat of substitute products in Dhaka, the capital city, is quiet high as the market contains other modes of internet such as mobile internet and WIMAX which has higher penetration and lower prices. This trend is repeated outside Dhaka, where these other modes of internet often are the most prevalent if not the only access to internet.

Buyer Power

The bargaining power of buyers can be said to be quite low. Case in point would be the events that follow once a customer is dissatisfied. Dissatisfaction can be due to a host of factors such as slow internet, line disruptions and poor customer service. In all cases, the situation condenses down to the customer either compromising with the ISP's shortcomings and living with it or switching to another ISP which may not be better in any way. Since the customer cannot influence the actions nor the offerings of an ISP and at the very best can only switch to another provider, bargaining power of ISPs is low.

Threat of new entrants

Threat of new entrants in Dhaka, the capital city, is moderate to high as the market contains all of the 30 major players and 470 other competitors mentioned above. Every neighborhood has at the very minimum 2-3 ISP providers leading to a saturated market. However, due to the markets preference for ever improving products and related services, a new entrant will not find it difficult to penetrate the market. Outside Dhaka, every district has 2-3 ISP's along with the other modes mentioned above. Threat of new entrants is this market in high due to the subpar state of service other players provide. New entrants however, may have limited momentum of expansion due to a lack of awareness in the market and a lack of infrastructure.

Supplier Power

Bargaining power of suppliers, in the case of PCL is quite low as their procurement would mainly be from their sister concern BPL.

2.7.2 SWOT Analysis of PCL

The following section will mention and elaborate on the strengths, weaknesses, Opportunities and threats of Premium Connectivity Limited.
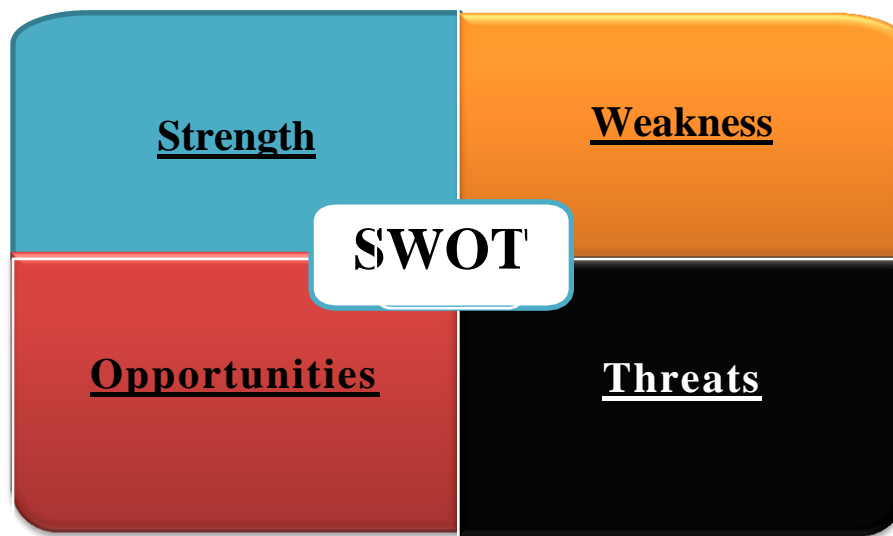
Figure 4: SWOT Analysis (Source: Business News Daily)

Strength:

Bangla Phone Limited's network and infrastructure are responsible for the majority of PCL's strengths. The following are PCL's advantages:

- Lower Ratio of Retention: The number of users sharing the same data capacity is referred to as the contention ratio (or over-subscription ratio). The lower the conflict ratio, the better the service quality. PCL can afford to give a low contention ratio to its clients because it buys bandwidth or data from Summit Communication Limited at a low cost. One of the grounds for charging premium rates is this.

- Lower Latency: In networking, latency is described as the "time it takes for a packet to travel from source to destination," The typical delay in Bangladesh is roughly 8-9 milliseconds. PCL can regularly provide a latency of 4-5 milliseconds because to their well-structured infrastructure. While this drop in latency may be undetectable to residential users and hence of little concern, it may be quite beneficial to business clients.

- Higher Redundancy: "A procedure in which additional or alternate instances of network devices, equipment, and communication media are installed within network infrastructure," according to the definition of networking redundancy. It's a way of ensuring network availability in the event of a network device or path failure and unavailability." As a result, the more the redundancy, the less likely the network will fail if one of the paths fails. PCL provides 4–6 levels of redundancy.

- Backbone: BPL has a network backbone that spans over 15,000 kilometers across the country, as previously noted. This applies to all districts and, eventually, all upazilas. PCL has full access to all perks as a sister company.

- 24/7 service: PCL delivers outstanding customer service 24 hours a day, seven days a week in order to charge premium fees. This is made possible by BPL's network and infrastructure, which are available 24 hours a day, seven days a week..

Weaknesses

The following are some of Premium Connectivity Ltd.'s flaws:

- IPv4 addresses are in short supply: The virtual world is shrinking as technology becomes more extensively used around the world, and IP addresses are running out. IPv6 addresses are being introduced to compensate for this. However, IPv6 addresses are incompatible with older devices and networks.

- People's opinions on price trends: Internet service providers (ISPs) should be allowed to provide reduced costs. In actuality, because bandwidth is sold in high-volume slabs, ISPs can only offer cheaper costs if a large number of customers purchase bandwidth.

- PCL is an Internet Service Provider, not an IT firm, so certain services that customers demand are unavailable. Customers occasionally request IT services that PCL does not provide and thus cannot fulfill.

Opportunities

PCL's plans that have the potential to provide opportunities for PCL are as follows:

- Triple Play GPON (Gigabit Passive Optical Network): The Triple Play GPON (Gigabit Passive Optical Network) is a service provisioning mode that allows users to receive all integrated services.

- Currently, the three services of Internet access, IPTV (video), and voice over IP (VoIP) can all be integrated using this technology through a single cable. PCL intends to implement this technology in the future, which could significantly expand its horizons. Establishment of the

- Data Center: Bangladesh is sandwiched between two tectonic plates, making a single data center impractical. As a result, it will need to build two data centers in order to be financially viable. Nonetheless, it is a step in the right direction toward a Digital Bangladesh.

Threats

The following are some potential threats that PCL may face in the future:

- Competition: Despite the threat posed by MNOs, WiMax operators, and other ISPs, there is a risk that another class of competitors will rise up against PCL if a specific

event occurs. If current NTTN license holders are also granted ISP licenses, this will happen. If this happens, PCL's competition will become even fiercer.

- Uncertain Regulations: At the moment, the ISP industry is not governed or regulated by the government in accordance with any set of precise and defined norms and rules. While there is a probability that certain laws will be favorable to PCL if they are implemented, there is no assurance that this will be the case. Volatility in the market or in the regulations that control it is always a danger.

2.8 Summary and Conclusions

Bangladesh is currently one of the fastest-growing countries in the world, and its businesses are following suit. Internet played a major role for Bangladesh to getting final recommendation to graduate from the status of a least developed country to a developing country. This appears to be good news for the ISP industry, despite the fact that the ISP market is currently saturated. This section of the paper looked at the organization of PCL, a new Internet service provider founded by Newton Group Ltd., and what it wants to accomplish and, hopefully, achieve in the future. ISPs can play a critical role in realizing Bangladesh's aim of becoming a digital nation. As a result, PCL has the potential to be a significant asset to Bangladesh. It should be mentioned, however, that the road ahead will not be simple.

2.9 Recommendations

The previous part has provided a better grasp of the path PCL should pursue.

- To begin, when it comes to the issue of contention ratio, a minimum of 2:1 for corporate users and 8:1 for home users should be implemented. If the quality is not compromised, a higher ratio could be implemented. More research should be conducted to determine this. Other alternatives that PCL may choose to investigate

include customer segmentation by location or other customer segment-specific considerations.

- In terms of client acquisition, conversion, and retention, PCL can afford to, and should, invest in cutting-edge marketing and positioning strategies. In order to grow the ISP market segment and get consumers from MNOs, PCL should start using more imaginative proactive tactics. This may be aided by the Triple Play GPON.

- Other approaches include focusing on business owners, introducing Collective Purchase choices, and so forth. In terms of pricing options, it has previously been indicated that Solution B (revenue sharing) is the only one that is realistic.

- Finally, Bangladesh is trailing behind the rest of the globe in terms of internet usage. Other countries have succeeded in creating such a demand for the internet that it is now regarded as a necessity rather than a luxury. ISPs must become more creative and imaginative in order to become more powerful players in the market. PCL is in a similar situation.

Chapter 3: Project Part: Current growth of internet subscribers in Bangladesh and its benefit towards our economy

3.1 Introduction

Background

Bangladesh is developing as a country, and its businesses are following suit. Bangladesh is becoming more digitalized as the rest of the world does. In Bangladesh, internet connectivity is increasing as a result of increased usage of technology and social media. With the introduction of a number of organizations in the internet service sector during the last several years, the growth trend has been outstanding. The internet's function is expanding and becoming more significant. This appears to be good news for the ISP industry, despite the fact that the ISP market is currently saturated. Furthermore, the internet makes it easier to start a new business because it is directly related to the dissemination and sharing of knowledge, which leads to an increase in the adoption of creative techniques. Furthermore, the internet helps to increased market transparency, which in turn increases competitiveness. Indeed, incorporating the internet into the manufacturing process boosts productivity and, as a result, economic growth for IT-based businesses.

Objectives:

- To know about current growth of internet subscribers of Bangladesh
- To know about how internet can bring change in the overall economy of Bangladesh
- To know about how Internet can digitalized our country
- To know about how internet can creates new business opportunity
- To know about how internet can decreases unemployment rate

Significance

The internet and its economic benefits are the subject of this report. Isp market has led firms to become more productive over the last decade, which has aided our economic progress. Economic growth is defined as a rise in an economy's productive capacity, which allows it to produce more commodities and services. Because it promotes information, inspires innovation, establishes networks, supports business, deepens capital, improves labor markets, strengthens market competitiveness, and assists enterprises in profiting from expanding markets, the internet has a favorable impact on the economy. As a result, the internet may be useful in combating economic downturns. As a result, studying the business sectors that lead to a healthier economy is critical.

3.2 Literature Review

The internet makes information more accessible and lowers the cost of searching. Businesses that use the internet can communicate more effectively, more quickly, and at a lesser cost. This decreases manufacturing costs, increases productivity, and produces economic growth by lowering internal and external transaction costs (Harris, 1998). Internet makes it easier to distribute enormous volumes of data that formerly had to be collocated spatially (Bloom et al., 2011). It also encourages the sharing of information at a lower cost, which encourages the adoption of innovative technologies developed by others (Benhabib and Spiegel, 2005).

The internet has an impact on the labor market (Stevenson, 2009) and the product market (Levin, 2011), and internet use appears to be favorably associated to economic growth. Furthermore, the internet is one of the most important components of entrepreneurship capital, which promotes economic growth. Entrepreneurial capital is defined as an economic agent's ability to generate new knowledge (Audretsch and Keilbach, 2007). As a result, the internet can help the economy recover from the recession by increasing inventive capacities

and increasing entrepreneur-ship capital. The internet creates a network that boosts economic growth. It's a type of network capital that can boost overall productivity across the economy's many sectors (Moshiri and Nikpour, 2010). As a net-work capital, the internet has network effects, which means that the more users who adopt it, the more benefits existing internet users will receive without incurring additional expenditures. Furthermore, internet communication allows for social networking, which is beneficial to economic outcomes, particularly in terms of stimulating innovation (Granovetter, 2005). The internet is believed to give a solution to the recession since it expands networks and fosters inventive growth. The internet promotes business, which leads to economic growth. The internet is being used to expand into new markets, learn new techniques through shared experiences, and build more resilient supply chains (Parikh et al., 2007). Profiting from providing goods and services to emerging countries is one of the possible economic benefits of ubiquitous internet access. Organization, management, and human capital are all affected by the internet (Moshiri and Nikpour, 2010). Furthermore, high-speed internet allows for the development of new business models, entrepreneurial activity, and the collaboration of companies that produce specialized goods (Bloom et al., 2011). It boosts trade, which boosts revenue growth as a result of commerce (Da- vies and Quinlivan, 2006). As a result, the internet stimulates business and trade development, allowing the economy to thrive and emerge from recession. The internet has a positive impact on the job market and economic outcomes. Better job matching is aided by high-speed internet. In this way, the internet has transformed the way workers look for work, which has implications for overall productivity (Stevenson, 2009). Furthermore, the internet promotes market competitiveness and economic growth. Low entry barriers and increased market transparency are two benefits of high-speed internet (Bloom et al., 2011) because it aids in the removal of information gaps. Markets become more efficient as access to information improves and competition grows, resulting in less price dispersion

and increased producer and consumer surplus. Furthermore, Mishra and Newhouse (2009) discover that the internet has a favorable impact on health outcomes, which may have an impact on economic development or growth in nations with underdeveloped health-care systems. To summarize, the internet can help solve the recession problem by improving the labor market and increasing market competition.

3.3 Methodology

In this paper, a qualitative research was undertaken to acquire information about the growing number of internet users and their impact on Bangladesh's rising economy. I have not included any numerical data in the following report because it is a descriptive report. The report focuses on a real-world scenario. I mostly used verbal analysis to explain how the internet supports our economy and how it aids us in dealing with the ongoing worldwide pandemic.

Research method

There are two types of educational research method. These are: a) Quantitative Research b) Qualitative Research. I performed a Qualitative research in this report. Because conducting an effective survey with a large number of people are quite difficult, especially when we are facing a global pandemic.

Population

Firstly I select all the employees of my organization. There was no way to getting access in another organization to perform an interview because of pandemic except link 3 Technologies. I do have some connections there and perform some online interviews. Primary I selected 28 people in total from my organization and link 3 technologies ltd.

Sampling Method

The process of picking a representative group from a large population is known as sampling. There are various types of sampling methods.

- Simple Random Sampling
- Stratified Sampling.
- Cluster Sampling.
- Systematic Sampling.
- Multistage Sampling

I have used Simple Random Sampling procedure to perform my interviews at Premium connectivity limited.

Sample Size

Primarily I selected a pool of 28 people and randomly select 15 people to perform interview.

Data source

During the preparation of this study, I employed both primary and secondary data sources. Such as:

Primary Sources: Primary data was gained from our organization through face-to-face conversations with my supervisor and managing directors, both of whom have extensive knowledge of the ISP sector.

Secondary sources: Secondary data was gathered through library and internet research on reports. Secondary sources for the research included independent research, journals, articles, and reports.

Limitation

In the research I had to face some problem. Such as:

- Sample size
- Time
- COVID-19 Pandemic
- Organization don't want to provide all the information

3.4 Findings and analysis

Bangladesh has become such a large internet market that it is now entering a new phase of huge digitalization. Bangladesh has recently seen a significant increase in internet subscribers. Bangladesh is on its way to becoming a digital Bangladesh, with the number of internet users nearly doubling in the last five years. According to the survey, over 67 percent of the country's total population now uses the internet, primarily through mobile phones. The number of internet users in Bangladesh climbed to 116.76 million in August this year, up from 66.96 million five years ago, according to the Bangladesh Telecommunication Regulatory Commission (BTRC). Over the last five years, the average yearly growth of internet users has been 13.5 percent. When compared to the same month the previous calendar year, internet subscriptions increased by 11.24 percent in October 2020. According to Financial Express, the surge in internet subscribers is primarily due to the increased use of smart phones in the country.

According to telecom experts and authorities, the number of internet users has risen in recent years as manual phones have been phased out of the domestic market in favor of smart phones. Higher internet penetration in Bangladesh has been aided by the replacement of manual phones with smart phones, economic development and strengthening of people's purchasing power, telecom infrastructure development, and familiarization with e-commerce

and online shopping. According to the study, internet service providers, mobile phone operators, and other service providers are all doing a decent job of promoting internet use in the country.
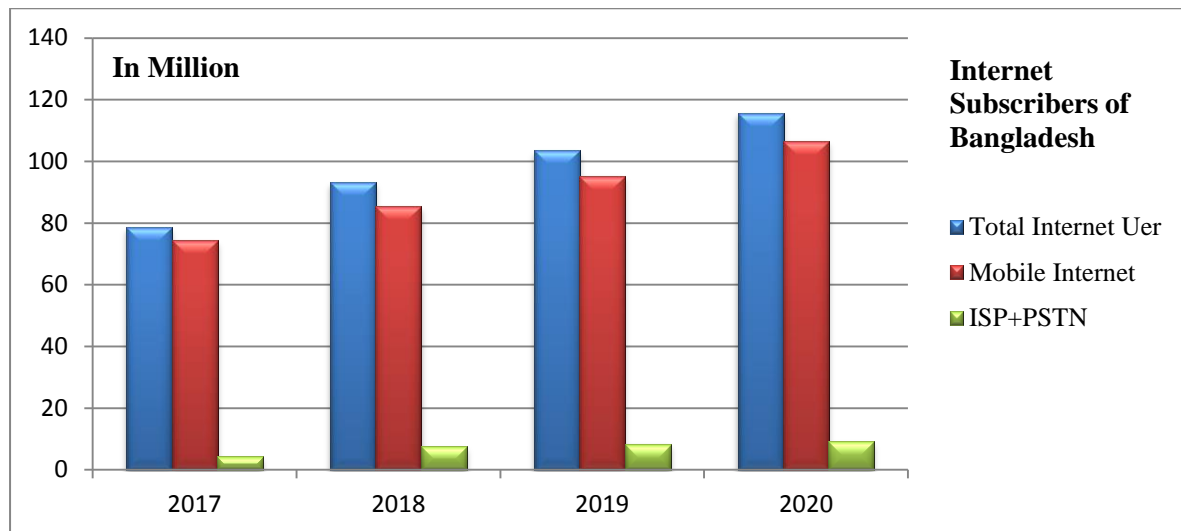
Figure 5: Growth of Internet Subscribers of Bangladesh (Source: BTRC)

According to newly released figures from Bangladesh's regulator, the Bangladesh Telecommunication Regulatory Commission, the country's internet users have surpassed 115 million (BTRC). In July 2019, total customers were 103.47 million, split between mobile internet (95.168 million) and ISP + PTSN (103.47 million) (7.8 million). In July 2020, 106.5 million of 115.6 million customers used mobile to access services, an increase of 10 million user's year over year.

Bangladesh Telecommunication Regulatory Commission has organized a group to draft a 5G service guideline, with the facility expected to be operational by 2023. However, due to the Covid-19 outbreak, all preparations have been put on hold for several months. Bangladesh is on the verge of launching 5G services. Bangladesh has ample 5G spectrum, as well as network providers and equipment handlers, according to studies. According to a research published in July 2020, 4G would dominate the market in Bangladesh in 2025, with 46% of

users. 3G users will account for 30% of the population at that time, while 18% will still be on 2G.

During the Covid-19 period and beyond, internet use encouraged online buying and e-commerce, virtual official activities, and online education and health services. Bangladesh's e-commerce sector has grown 30 times in the previous five years, giving it a significant boost. The loyalty of suppliers and customers to the online platform for doing business and acquiring goods has aided the growth of electronic trade in the country. According to the (BCC), e-commerce in Bangladesh reached Tk 166.16 billion in August this year, about 29.67 times its 2016 level. After 2016, year-on-year growth in online trade and commerce began to accelerate, with the total value of the business reaching Tk 86.32 billion in 2017. According to BCC data, the sum was Tk 105.04 billion in 2018 and Tk 131.84 billion in 2019. Bangladesh's online shopping and mobile payment systems have grown in tandem with the countries increased internet usage. Online payment systems, such as mobile financial services, internet banking, and other gateways, have been established, and commercial banks have begun to offer paperless banking through digital platforms to their customers, resulting in a major increase in online business and shopping.

Internet on changing Economy of Bangladesh

The use of the internet is causing substantial changes in the country. The advantages for business communications are significant, both in terms of cost savings and speed. Families with members who live overseas appreciate the Internet because it allows them to communicate more frequently and at a lower cost. Researchers may now obtain significant information fast and at a low cost, which was previously impossible. Businesses and celebrities are gradually accepting the Internet as their primary means of communication.

Special advertising operations are being carried out by ISPs in order to provide Web page services. A new social class is emerging, primarily among the young generation, who see the Internet as a useful instrument for advancing their careers and globalizing their ideas and creativity. Many Internet users have remarked that it has opened up a whole new world for them, that it has provided them with a new source of knowledge, and that they have made many excellent friends and organizations all over the world. However, some argue that surfing online is a very expensive habit that may become addictive and wastes a lot of time. A segment of young people, primarily from the upper class, are misusing the Internet by utilizing it primarily for fun, which is not a good practice for a developing country like ours. The most discouraging news is that Bangladesh has yet to establish an academic network to provide Internet access to the enormous number of university teachers, students, scientists, and researchers who are critical to the country's development.

Improving education opportunities

The Internet now has a significant impact on education at all levels by giving limitless learning opportunities. People can utilize the Internet to produce and share knowledge, as well as to build innovative teaching and learning methods that engage and stimulate students' imaginations, at any time, on any device. We can accelerate economic growth and improve society's well-being around the world by connecting and empowering students and educators.

The greater access provided by the new cable is proving to be quite beneficial to Bangladeshi students. Students can access class notes, video lectures, emails, and social networks, as well as communicate with individuals in their profession all around the world, thanks to the campus's high-speed connectivity. The increased internet connection not only benefits students, but it also makes life easier for staff and enables for more effective teaching.

Students can collaborate with one another without being constrained by physical or time constraints. You can now utilize the Internet to access libraries, encyclopedias, art galleries, news archives, and other knowledge sources from anywhere in the world, which I believe is a significant educational advantage. The internet is a powerful tool for accelerating the learning process. I also believe that the Internet is an excellent tool for learning and practicing other languages. This is a significant issue in many countries, including Spain, and requires special attention in today's globalized world.

The Internet has evolved into a critical tool for exchanging knowledge and education; it is not only a source of information and a location where results can be published, but it is also a route for collaborating with other persons and groups working on related research topics.

Internet connectivity for visitor

Improved connectivity is now available to visitors to the country. According to Pan Pacific Sonargaon Hotel, the bulk of visitors to Dhaka are on business, hence it was critical that their requirements be met. Broadband was introduced in 2008, and the hotel constructed a '360-degree' Wi-Fi system in 2011. This meant that the company's clients were now fully and consistently served with internet access throughout the building. People of all ages are benefiting from speedier internet connections at home, away from the hustle and bustle of Bangladesh's corporate sector. This allows families to stay in touch with relatives all across the world, as well as assist young people with education, gaming, and access to social media.

Internet on Business

The internet has altered the business process forever. It has made it possible to do business in new ways. Communication technology along with the internet has given connectedness and information dispersion a whole new meaning. Employees stay in touch via email, instant messaging, the business intranet, and other means. On the other side, the internet has made it

easier for company personnel to collaborate. Project work and information sharing are no longer hampered by geographical barriers. Furthermore, the internet has aided the development of an online business or e-commerce culture. Many players have started e-commerce stores in recent years. Internet banking, payment gateways, and other similar services are all part of a typical supply chain transaction.

Workers can now log in from home or from a remote place thanks to the internet. It has aided on-the-go employees by keeping them updated on business events. In addition, the internet has aided the development of concepts such as cloud computing, which has enabled large-scale data processing and storage. The internet has assisted the company in lowering its infrastructure costs.

Making the whole country digital

Improving cell and internet coverage will eventually aid in the development of many of the country's poorer rural areas. This will be a step toward the government's long-term objective of having the entire country "digital" by 2021. Rural areas are now limited to 2G and 3G technologies, with the most remote rural areas still relying on microwave and satellite connections, but plans are in the works to build at least one "data center" every group of villages. Rural connectivity is already benefiting local Bangladeshis, with telemedicine being one example. Doctors in outlying villages attend online conversations with Dhaka-based colleagues who assist them with diagnosis. This service is expected to grow in popularity.

Freelancing: a solution to the unemployment problem

According to World Vision Bangladesh's research, one out of every ten of Bangladesh's 44 million young people is unemployed. Moreover, each year, hundreds of graduates from Bangladesh's public and private colleges fail to find suitable career opportunities. As a result, the country's rate of educated unemployment is rising at an exponential rate. Now these

young unemployed persons can quickly begin their careers by taking some IT classes and freelancing online. They earn a living while simultaneously contributing to the economy by earning a salary in a valuable foreign currency.
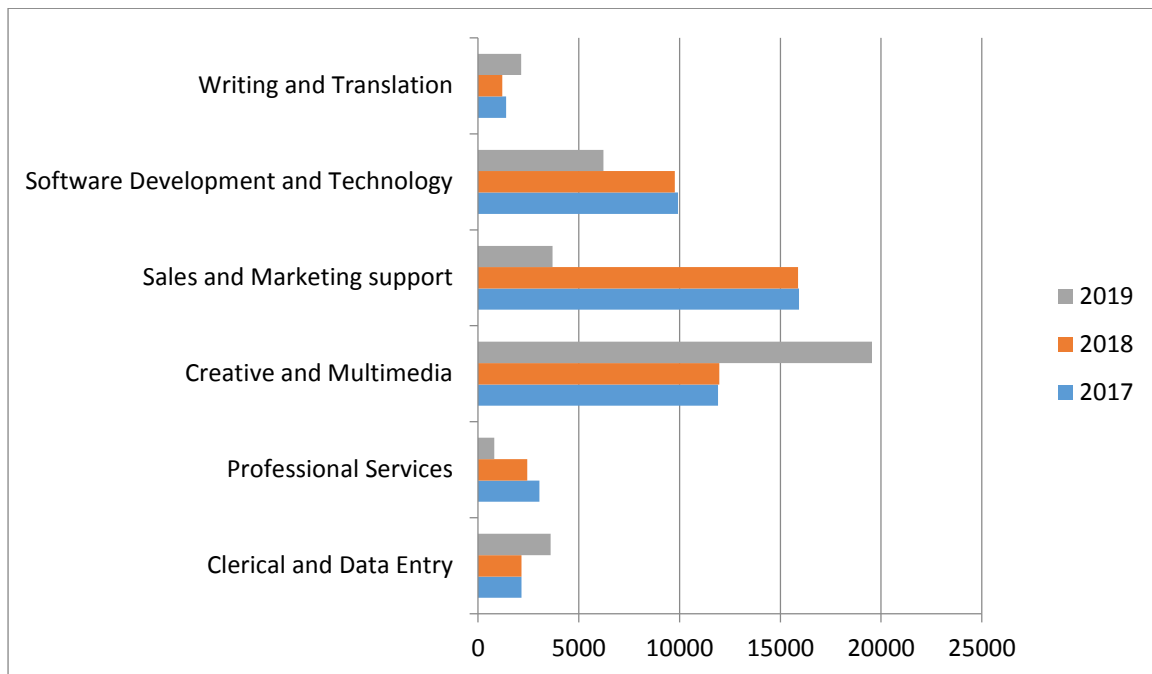
Figure 6: Number of freelancers in Bangladesh (Source: Online labor index 2020

By increasing Internet access and using technological devices, such as computers or smartphones, Bangladesh now increases their online labor market. Compatible technologies include software development, online marketing, writing and translation, data entry or multimedia services.

Increase economic benefits on Bangladesh's digital workforce require better Internet access and stability. Bangladesh benefits from greater high-speed Internet expansion across the country to improve the growth of its digital economy.

Opportunities for women

Many Bangladeshi women, particularly those with advanced degrees, forego their jobs to care for their families. For many Bangladeshi women, freelancing is becoming a popular employment option because it allows them to work from home.

Bangladeshi women who want to break free from their traditional domestic obligations will find freelance work to be an excellent option. According to research, Bangladesh's female freelancers have begun to obtain more trust than their male counterparts in terms of work quality. Increasing number of women's participation in freelancing boosts trust in the industry.

3.5 Summary and Conclusion

Bangladesh has seen a significant increase in the use of digital technologies, particularly the Internet. It's making the transition to the internet of things. The widespread usage of the internet by the general public indicates that a country's economy is improving in quality. In several sectors of the economy, the Internet has resulted in significant cost savings, resulting in quicker productivity development. It also results in lower consumer prices, leading in faster rises in living standards. Despite the challenges of developing an internet-dependent society, Bangladesh's government has prioritized the development of information technology usage patterns in several areas. Bangladesh has recently been connected to the information superhighway by an underwater optic-fiber cable network, creating an environment that encourages citizens to use the Internet.

3.6 Recommendations

As Bangladesh's economy develops, digital platforms in trade, commerce, and education help the country progress. And, in order to make it sustainable, the government should concentrate on a few key areas. These are the ones.

- Our economy would grow at a faster rate than it does now if we could extend internet coverage through low costs; reduce the old system of learning, and commercial and economic activity.

- Many impoverished individuals, particularly women, are still unable to use the internet. If we can bring them under the net, economic progress will accelerate and social insecurity will be greatly reduced.

- The government should make a concerted effort to attract investment in the production of digital devices in the country in order to lower the cost of the digital platform.

- The submarine fiber-optic cable will be the backbone of Bangladesh's internet and mobile services for years to come, but it only has a 25-year lifespan, so a replacement plan must be in place well ahead of that. The government has already agreed to develop a second undersea cable link with the SEA-ME-WE Consortium.

- The lack of a continuous power source is still a serious issue in the country. Freelancing job, such as intricate software development coding, necessitates a high degree of attention, which is sometimes disrupted by frequent power outages.

- For freelancers in remote locations, a lack of high-quality internet connections, as well as increased broadband pricing, is a key issue. Despite the availability of broadband in some locations, freelancers typically find it too slow for their needs.

- Another issue for this fast-growing company is the lack of an accessible payment mechanism, particularly for receiving payments from foreign clients.

- Despite modest increases, women's engagement in freelancing is still insufficient. The government should encourage more women to work as freelancers.

- Broadband connection growth is slow: roughly 4 million connections, or about 6% of the current market. The slow rate of development could be deadly to ISPs' existence,

since it could lead to the market being saturated by MNOs to the point where they decide on market norms of engagement.

- As the demand for internet and data bandwidth increases, so does the need for MNO base stations to be connected by fiber (for high capacity transmission). If MNOs respond to that request, ISPs will find it difficult to survive, let alone prosper, in the market.

- ISP growth plans are hampered by a lack of Internet infrastructure in sub-urban and district areas. Many areas in Bangladesh lack the necessary infrastructure to maintain consistent electrical supplies, and power outages are widespread. MNOs win out in certain locations, while ISPs lose out.

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