Internship Report

Analysis of AmberIT Limited and ISP Industry in Bangladesh: An Internship Experience Perspective

Submitted to

Dr. Md. Mohan Uddin

Professor

School of Business and Economics

United International University

Submitted by

Syed Zafar Mohiuddin

ID: 111 201 006

Bachelor of Business and Administration

Date of Submission

December 14, 2024

Letter of Transmittal

December 14, 2024

Dr. Md. Mohan Uddin

Professor

School of Business and Economics

United International University

Subject: Submission of the internship report on **"Analysis of AmberIT Limited and ISP Industry in Bangladesh: An Internship Experience Perspective."**

Dear Sir,

I am honoured to present my internship report on "Analysis of AmberIT Limited and ISP Industry in Bangladesh: An Internship Experience Perspective." I am submitting this report for the completion of my BBA degree from the United International University. In this report I wanted to note down how the financial management affects the firm's performance. I have put my best effort in preparing this report by collecting relevant information from various research papers and Amber IT's Finance and Accounts department. From the internship I have learned how the corporate service provider company operate and I have experienced a number of challenges which I eventually overcame from the help of my seniors.

I hope that you would spend some of your valuable time in order to assess my report. I humbly thank you for your valuable and continuous guidance.

Yours Sincerely

Syed Zafar Mohiuddin

ID: 111 201 006

Declaration of Student

I, Syed Zafar Mohiuddin, a student of undergraduate program BBA Major in Finance of the United International University bearing the ID: 111 201 006. I hereby declare that the internship report titled “Analysis of AmberIT Limited and ISP Industry in Bangladesh: An Internship Experience Perspective” Is solely prepared by me with the guidance of Dr. Md. Mohan Uddin, Professor School of Business and Economics, United International University, after the completion of internship at Amber IT Limited.

This report is prepared and submitted for academic purposes only, as it is mandatory to submit an internship report to complete the Bachelor of Business Administration degree at United International University.

I am pleased to have this opportunity to complete my internship which has helped me learn practical aspects of day-to-day activities.

Syed Zafar Mohiuddin

111 201 006

BBA

School of Business and Economics

United International University.

Acknowledgement

All praises to the almighty for making me able to complete this internship along with the report titled “Analysis of AmberIT Limited and ISP Industry in Bangladesh: An Internship Experience Perspective.” Successfully.

I would like to convey my gratitude to my academic supervisor Dr. Md. Mohan Uddin, Professor, School of Business & Economics, United International University. Who has guided me through this journey to complete my report. Without his continuous guidance and support this task would have been much more difficult.

I am grateful for the guidance provided by Mr. Abul Kalam Samsuddin, GM, Finance and Accounts. I want to further extend my gratitude to Mr. Subash Chandra Sutradhar, Manager, Finance and Accounts for showing the basics about how a corporate service provider company operates its day-to-day financial activities. I am also grateful to Mr. M A Hannan Milton, Executive, Finance and Accounts department for guiding and showing me day to day work with much patience.

Again, I am grateful to Mr. Samir Sutradhar, Manager, Tax and Vat for enriching my knowledge on tax and vat issues of a corporate firm.

Executive Summary

The historical development of ISPs in Bangladesh owes its origin and momentum to several government interventions, competitive market forces, and technological developments. Major developments that followed the early access to the Internet in Bangladesh, which started in the mid-1990s, were largely attributed to the increase in digital connectivity through government initiatives and private investments. Going on in 1997, the formation of the Bangladesh Internet Exchange was significant in that it allowed for better local routing. The advent of broadband technology, mobile Internet, DSL, and fiber-optic networks served to broaden changes in the landscape of ISPs. A surge in mobile internet, particularly since 2015, has met with challenges relating to infrastructure inadequacies and service quality. The report also describes the status of AmberIT Limited within a fast-growing industry, together with the trends in ISPs, efforts being sustained in that perspective, and the importance this report assumes in contributing to future studies in analyzing the interplay of business with technology in the context of Bangladesh.

Having attained considerable growth in the last 10 years, the ISP industry owes its development to the enhancement of Internet penetration, government efforts, and a soaring demand for digital services. More than 10 million broadband subscribers, most of whom are driven by mobile Internet, account for more than 180-million Internet users in the country. The industry is in the multibillion-dollar range and the annual growth rate is about 10-12% year-on-year. Government projects to create a digital Bangladesh are improving Internet infrastructure in rural areas as well as adding to service quality with investments in fibre-optic networks. The Internet service industry thus stands on the verge of maturity, with growth areas bleeding into the poorly serviced rural areas. Demand is to a large degree seasonal, variably sensitive to economic conditions and customer choices. High cost of infrastructure, regulatory impediments, pricing pressures, and expectations around service quality are the major challenges. However, from this report we have also found that increased Internet penetration, rollout of 5G, support from the government, and

technological advancements would be the possible opportunities that ISPs can tap into to achieve lasting success in the Bangladeshi market.

From the analysis of the organization, we found that, AmberIT caters to a diverse customer base: individual consumers, SMEs, corporate sector, educational institutions, government offices, NGOs, online retailers, and media outlets. With all requiring varied services such as fast net, business security, and the work of customer help. Services provided by AmberIT include broadband connection to individual users, fecility of corporate solutions, cloud service, and VoIP. Also, AmberIT focuses on developing an excellent network structure, fiber optics and wireless technologies are used to dictate its scalable internet plans. Its SWOT analysis indicates that the strength lies in its brand reputation, infrastructure, and customer service, while threats to AmberIT include price competition and supply issues, limited coverage in the rural sector, competition, economic downturns, and cyber threats.

The report also discusses about the internship experience. During my internship at AmberIT Limited, in the Finance and Accounts department, I was able to draw together the academic with the real world. My duties entailed financial postings, dealing with security deposits, recording vendor bills, preparation of payment vouchers, and assisting with VAT and tax duties. I received in-depth training in financial management, accounting packages, and budgeting so as to be able to assume responsibilities in the finance department, such as the preparation of financial reports and the validation of various invoices. From the analysis and feedback, my supervisor's continued concern for my professional development was exemplary. The sets of skills which I applied include communication, responsibility, and punctuosity. Others that I acquired were professional communication, analytical problem-solving, and teamwork. I was able to take theoretical knowledge and put it into actual financial analysis, teamwork, proficiency with Microsoft Excel, and application of accounting principles, causing my general outlook towards finance to be broadened.

In the recommendation part, to improve my performance, I did a SWOT analysis and found some key areas for growth. My strengths are powerful analytical skills and flexibility, and my weaknesses are limited industry workflow knowledge and complexity in decision-making for any strategic activity. So, for the opportunities, I considered finance specialization in the ISP industry; I see the threats as rapidly evolving technology, which requires constant updating of skills to compete with that. Hence, I wish to acquire deeper industry knowledge, study business cases--for better decision-making formation, and be a true follower of all technological advancements. Again, To better the workplace performance, then changes like the induction of new technologies for better finance data management, better training programs aimed to speed the onboarding of new employees, a feedback mechanism for interns, and cross-departmental improvements could help strengthen collaboration and promote understanding of the company.

To conclude, the internship experience at the finance department of AmberIT provided me valued insight into financial practices in the telecommunications set-up. Through the internship, I have learnt important finance procedures, such as reporting, forecasting, budgeting, and cost control. Internship work enhanced my analytical, problem-solving, and communicative skills and furnished me with an opportunity to utilize my academic knowledge in real-life situations. The mentorship I enjoyed gave a fillip to my confidence and also broadened my understanding of corporate finance. All along, it has made me stronger in my belief in finance and has given me useful skills and added experience for my future relevant career.

Contents

Chapter One: Introduction

1.1 Background of the Report

1.1.1 ISP Evolution of Bangladesh

Government regulations, market forces, and technology developments have all influenced the development of Internet service providers (ISPs) in Bangladesh. Bangladesh has changed over the last few decades from a country with little internet access to one where digital connectivity is spreading. A combination of government programs, private sector investments, and the growing dependence on broadband and mobile networks have played significant role in this expansion. The main phases of ISP development in Bangladesh are summarized in this section, which also examines the historical background, difficulties, and significant events in the nation's internet service industry.

In 1990s the Internet was launched in Bangladesh and in the mid-1990s Bangladesh's internet journey was started. Before this, internet access was mostly restricted to government buildings and a small number of universities due to the nation's inadequate telecommunications infrastructure. The first dial-up internet connection was launched by the Bangladesh Telegraph and Telephone Board (BTTB) in 1996, but it was initially only available in urban areas, primarily Dhaka.

Several factors contributed to the slow spread of internet usage during this time: high expenses for both internet use and hardware. Due to inadequate infrastructure, internet services were primarily accessible to government buildings, academic institutions, and a small number of private companies. The general public is not well-informed about the advantages of the internet.

An important turning point was reached in 1997 with the creation of the Bangladesh Internet Exchange (BIX), which offered the necessary infrastructure to enhance local internet traffic

routing and connectivity throughout the nation. When the government permitted the private sector to join the ISP market in the late 1990s, the next stage of ISP development in Bangladesh started. In order to increase internet access outside of the government sector, this development was essential. Initially offering dial-up and later broadband internet services, private ISPs included GrameenPhone, Aamra Networks, and BanglaNet. Dial-up modems were the most widely used connection method at the time, and the internet remained comparatively costly and slow. But as the need for faster internet grew, broadband services started to take off in cities, particularly Dhaka. During this time, significant developments include:

2002: GrameenPhone, a mobile operator first and foremost, opened up mobile data connectivity options for a larger audience by offering internet services to its customers. 2003–2005: Additional ISPs, mainly in Dhaka and Chittagong, joined the market with broadband services, including BRACNet, Link3 Technologies, and BDCom.

2005 saw the introduction of DSL (Digital Subscriber Line) technology, which allowed for faster internet speeds than dial-up. As a result, ISPs started to broaden their product offerings to include home broadband services.

Due in large part to the high cost of broadband and the sparse coverage of infrastructure outside of urban areas, the internet penetration rate remained low despite the early progress.

With the advent of mobile internet services in the middle of the 2000s, the ISP landscape in Bangladesh underwent a dramatic change. A far greater number of people, especially in rural areas, can now access the internet thanks to the growth of GPRS (General Packet Radio Services) and EDGE (Enhanced Data rates for GSM Evolution).

Additionally, the government started to regulate the telecom industry. The Bangladesh Telecommunication Regulatory Commission (BTRC) was established in 2008 to regulate the sector and guarantee fair competition and high-quality services.

During this time, significant advancements include:

The first notable mobile internet service was provided by GrameenPhone in 2006 when it started providing internet services through its GPRS/EDGE network.

2010: The introduction of mobile data services by Teletalk, Robi, and Banglalink further expanded internet access nationwide.

2013: Four mobile operators, including GrameenPhone, Robi, Banglalink, and Teletalk, were granted licenses by the government to provide 3G (third-generation) mobile broadband services. More people were able to access data-intensive services like online gaming and video streaming after 3G was introduced, which also greatly increased mobile internet speeds.

By 2015, mobile internet had surpassed fixed-line broadband in terms of subscriber numbers and was the main source of internet access for a large number of Bangladeshis. The widespread use of mobile internet was aided by the low cost of data packages and the affordability of smartphones.

In Bangladesh, a broadband revolution started in 2015 and continued until now. Launched in 2009, the government's Digital Bangladesh initiative aimed to improve ICT infrastructure and ensure that everyone could access the internet. Consequently, fixed broadband services started to expand quickly in cities.

Faster and more dependable internet speeds were made possible by the advent of fiber-optic broadband, also known as Fiber to the Home (FTTH). Since fiber networks provided gigabit-level speeds and replaced antiquated copper wire connections, this was a significant advancement for the ISP industry. Major cities, especially Dhaka, Chittagong, and Sylhet, now have more fiber-optic coverage thanks to companies like Fiber@Home, Link3, Banglalion, and MetroNet.

Between 2015 and 2017, the government installed fiber-optic broadband in cities, resulting in faster internet speeds and the capacity to accommodate bandwidth-intensive applications like e-commerce and high-definition streaming.

2018: All of the major mobile operators—Banglalink, Teletalk, Robi, and GrameenPhone—launched 4G LTE mobile services, which revolutionized mobile internet access by offering better coverage and faster speeds, especially in urban areas.

In order to get ready for the next stage of internet innovation, mobile operators and the government started testing 5G technology in 2020–2024. The technology provides users superfast speeds and less latency.

Due to the increased use of smartphones and reasonably priced data plans, broadband penetration in Bangladesh increased dramatically over the past ten years, and mobile internet usage experienced previously unheard-of growth.

The ISP industry in Bangladesh has grown significantly, but there are still a number of obstacles to overcome:

Infrastructure gaps

Rural and isolated areas continue to face limited connectivity, whereas urban areas enjoy the advantages of fast internet access.

Quality of service, or QoS

Although broadband technologies have advanced, many users still complain about service reliability problems, such as network congestion and sporadic outages.

Regulatory obstacles

With worries about cybersecurity, data privacy, and the role of governmental censorship in the digital sphere, the regulatory environment is still being developed. The digital divide To guarantee fair internet access nationwide, closing the gap between urban and rural areas continues to be a top priority. However, the future outlook is promising. The rollout of 5G, along with ongoing

infrastructure investments and the expansion of fiber-optic networks, is expected to further enhance internet speeds and coverage. Furthermore, initiatives like Smart Bangladesh are aiming to make digital services more accessible to citizens, creating opportunities for further economic and social development through technology.

The outlook for the future is bright, though. It is anticipated that the introduction of 5G, continued infrastructure expenditures, and the growth of fiber-optic networks will improve internet coverage and speeds even more. Additionally, programs like Smart Bangladesh seek to increase citizens' access to digital services, opening doors for additional technological advancements in social and economic areas.

1.1 Objectives of the Report

The purpose of this report is to note down and summarise the Analysis of AmberIT Limited and ISP Industry in Bangladesh. which I have done and learned from my work as an intern at Amber IT Limited and analysing various research papers.

The specific objectives of the report are listed below:

- Analyse the ISP industry
- Describe the status of Amber IT
- Identify the impact of Financial Management on ISP firm’s performance
- Analyse the personal status in practical workplace

1.2 Significance

This report is significant in a number of important ways. First of all, it offers a thorough analysis of Bangladesh's Internet service provider (ISP) market, highlighting opportunities, trends, and difficulties in this quickly changing field. With a focus on AmberIT Limited, the report works as a case study that provides helpful details about the strategic initiatives and operational

procedures of a major market participant, showing real-world applications of theoretical concepts learned during the internship. The findings are improved by the hands-on experience gained during the internship, which gives the theoretical frameworks discussed a practical context. The analysis additionally includes suggestions for enhancing procedures in AmberIT Limited and the larger ISP sector, which can help stakeholders—such as management, legislators, and newcomers to make wise choices. This report adds to the body of knowledge already available on Bangladesh's ISP sector and could be used as a guide by students and researchers in the future who are interested in the connection between business and technology in developing nations. Additionally, the findings might point out gaps or directions for more investigation, promoting follow-up studies that might boost the sector's development and creativity.

1.4 Scope of the Report

In this report I have noted several important aspects of corporate service provider companies. Which are “The effects of Accounts Receivables Management on Firm’s Performance.” This report will also include my other learning from this internship. Work experience from this institution helped me learn a lot more about corporate companies. This scope also includes structure of the organization, how each department of the organization works in order to get everyday tasks done efficiently.

1.5 Limitations of the Report

It is a very difficult task to understand and know all the activities done by an organization by working as an intern for a few months. The time I worked in Amber IT was not enough to fully gauge the working conditions and limitations of the organization. Here are the limitations I encountered while preparing the report.

The three months I have worked here is far too short for me to fully understand every day of working.

Time constraints during work hours also didn't let me survey the finance and accounts manager for a better understanding of financial activities.

As I was only an intern with no plan of becoming a permanent employee, I wasn't handed several pieces of information for the sake of confidentiality.

Chapter Two: Analysis of the Industry

2.1 Specification of the Industry

Over the past 20 years, Bangladesh's Internet Service Provider (ISP) sector has seen substantial expansion and change. ISPs are now an essential part of the nation's telecommunications infrastructure due to the growing significance of internet connectivity for business, education, and personal reasons.

2.1.1 Present Situation:

Currently, a range of national and regional companies provide a range of services, such as fiber optics, wireless internet, and broadband, in Bangladesh's ISP market. Significant infrastructure investment has been made in this sector, especially in fiber-optic technology, which improves speed and dependability. With more and more customers using smartphones to access the internet, the market has grown as a result of the proliferation of mobile internet services. Digital entertainment, online learning, and remote work are some of the reasons driving the ongoing increase in demand for high-speed internet. The Bangladesh Telecommunication Regulatory Commission's (BTRC) regulatory changes have made the market more competitive and prompted ISPs to innovate and diversify their offerings.

2.1.2 Historical Context Early Years (1990s-2000s):

In Bangladesh, the ISP sector started to take shape in the latter part of the 1990s. Around 1996, the first ISPs were founded, specializing in dial-up services. There was little use of the internet, mostly in cities, and it was expensive and slow.

2.1.3 Growth and Expansion (2000s-2010s):

A major turning point was the introduction of ADSL technology in the early 2000s, which made internet access quicker and more reasonably priced. Several ISPs entered the market during this time, and competition started to grow. As part of its 2009 launch of the Digital Bangladesh initiative, which aimed to increase connectivity throughout the country, the government also contributed to the promotion of internet access.

The Fiber Optic Revolution, which began in the 2010s: The landscape underwent a significant transformation in the mid-2010s with the introduction of fiber optic technology. In order to satisfy the increasing demand for high-speed internet, ISPs started making significant investments in fiber infrastructure. This change increased coverage into formerly underserved areas while also improving service quality

The swift growth of mobile internet, driven by the widespread use of smartphones, further altered Bangladesh's internet access landscape. People started using the internet more frequently after mobile operators started to offer reasonably priced data plans.

2.1.4 Present Trends and Prospects:

With rising investments in infrastructure and technology, Bangladesh's ISP sector is expected to continue expanding. More demand is anticipated as e-commerce, online education, and digital services grow. There are still obstacles to overcome, such as navigating regulatory environments and the requirement for improved cybersecurity measures.

In conclusion, from offering few dial-up services, Bangladesh's ISP sector has grown into a thriving market with high-speed fiber optic connections and extensive mobile internet access. The industry is expected to see more advancements and growth as the need for internet connectivity keeps

2.2 Size, Trend, and Maturity of the Industry

2.2.1 Bangladesh's ISP Industry Market Size

Over the past ten years, Bangladesh's ISP sector has grown significantly due to rising internet penetration, government initiatives, and rising customer demand for digital services. According to the latest data, the market size can be described by a number of important factors:

i. An increase in broadband subscriptions and internet users In Bangladesh, the number of people using broadband internet has been rising steadily. Over 10 million people in Bangladesh use broadband internet according to recent reports, and the market is expanding thanks to both fixed-line and mobile broadband services. The Bangladesh Telecommunication Regulatory Commission, or BTRC, reports that mobile broadband subscriptions are still growing quickly and that there are now over 4 million fixed broadband users alone.

ii. In Bangladesh, mobile internet has been the main factor influencing internet usage. With over 180 million mobile users, the nation has witnessed a significant uptake of 3G and 4G services, and 5G is currently being expanded in major cities. A sizeable amount of the total ISP market revenue comes from the mobile internet industry. This market is dominated by major companies like Airtel, Robi, Banglalink, and Grameenphone.

iii. ISPs play a major role in the multibillion-dollar telecommunications sector in Bangladesh. The growing demand for faster internet, particularly in urban and semi-urban areas, has led to an annual growth rate of about 10–12% in the broadband internet segment in recent years.

iv. The country's internet infrastructure, especially in rural areas, has been greatly aided by the Digital Bangladesh initiative. The expansion of broadband services has been fueled by the opportunities this has created for both domestic and foreign ISPs to enter the market.

v. Both public and private initiatives are enhancing internet accessibility and service quality, and there has been a significant increase in investment in fiber optic networks, especially in major cities like Dhaka, Chittagong, and Sylhet. It is anticipated that these investments will keep growing the market, particularly given the rising demand for high-speed internet among consumers, businesses, and educational institutions.

vi. There are several companies providing both fixed-line and wireless broadband services in Bangladesh's competitive ISP market. This includes international brands that provide upscale services as well as local and regional businesses that serve particular geographic areas. The market is dynamic since consumers can now access services at different price points thanks to the growth of inexpensive internet packages.

Estimated Market Size: The telecom industry in Bangladesh, which comprises both ISPs and mobile operators, is estimated to be worth billions of USD, though precise numbers may differ. With fixed broadband revenues estimated to contribute a growing share of the overall telecom sector, the ISP segment alone has been growing at a rate of roughly 10-15% annually.

Future Forecasts: The market is anticipated to keep expanding due to the following factors:

- The growth of fiber optic networks.
- 5G network deployment.
- A rise in the need for fast internet services.
- The government's initiatives to increase rural areas' access to broadband.

2.2.2 Trend

The trends of the ISP industry are discussed below:

Greater Penetration: An increase in the use of smartphones and mobile internet.

Fiber Optic Expansion: There has been a notable move toward fiber optic networks, particularly in cities.

Government Initiatives: Investments in internet infrastructure have been driven by Bangladesh's efforts to promote digitalization.

2.2.3 Maturity

The maturity of the ISP industry is discussed below:

Present Maturity Stage: With multiple players and growing service diversification, the ISP sector is currently growing to maturity.

Market Saturation: Rural areas still have room to grow because of lower internet penetration, even though urban markets are getting close to saturation.

2.3 Seasonality

The seasonality of the ISP industry is discussed below:

i. **Educational Cycles:** Since students and educational institutions depend on internet access for online coursework and research, demand for internet services typically rises during the academic year (January to November).

   On the other hand, demand might decline during the holidays, especially in December when schools are closed.

ii. **Festive Seasons:** As people use social media and online platforms to connect with family and friends during major festivals like Eid and Durga Puja, internet usage increases.

   However, during these peak hours, network congestion might cause brief interruptions.

iii. **Climate Factors:** Infrastructure upkeep and service delivery may be impacted by the monsoon season, which runs from June to September. Customer satisfaction may suffer from service interruptions brought on by heavy rains.

When people stay inside during the rainy season, there is a greater demand for streaming services and online entertainment.

iv. **Economic Factors:** All year long, trends in urbanization, shifts in disposable income, and economic ups and downs can affect internet adoption rates and service package enrollments.

v. **Promotional Seasons:** In order to increase sales during off-peak times, especially during the summer or around New Year's promotions in January, ISPs may offer special discounts or promotions.

vi. **Technology Upgrades:** Demand may increase in response to the introduction of new services or technologies (like fiber optics). Temporary spikes in new subscriptions can also result from awareness campaigns for improved service.

ISPs in Bangladesh can better plan their marketing campaigns, allocate resources, and improve customer satisfaction all year long by being aware of these seasonal trends.

2.4 External Economic Factors

The external economic factors of the ISP industry are discussed below:

i. **GDP Growth:** As firms and households look for connectivity, the general expansion of the economy has a direct impact on disposable income and technology investment, which raises demand for internet services.

ii. **Investment Climate:** The caliber and scope of services offered by ISPs are influenced by both local and foreign direct investment (FDI) in infrastructure, such as fiber optic networks.

iii. **Regulatory Environment:** Competition and service accessibility can be influenced by government regulations pertaining to telecommunications, licensing standards, and foreign investment. An important part of industry regulation is carried out by the Bangladesh Telecommunication Regulatory Commission (BTRC).

iv. **Consumer Purchasing Power:** The affordability of internet services is influenced by the degree of consumer purchasing power. Consumer preferences may move toward more affordable service options as a result of economic difficulties.

v. **Market Competition:** Having several ISPs encourages competition, which affects marketing tactics, service innovation, and price. Consumers may benefit from decreased prices as a result of more competition.

vi. **Technological Developments:** The local market is impacted by worldwide developments in telecommunications technology. Using new technologies, such as 4G and 5G, can improve consumer experiences and service offerings.

vii. **Urbanization Trends:** As cities become more populated, there is a greater need for mobile and broadband internet services, which affects where ISPs concentrate their resources and infrastructure expenditures.

viii. **Inflation Rates:** Elevated inflation might impact ISPs' operating expenses, such as maintenance and equipment, which could result in higher rates for customers.

ix. **Employment Rates:** Higher employment rates result in more people using the internet for both personal and professional reasons. On the other hand, when consumers cut back on non-essential spending, unemployment may lower demand.

x. **Global Economic Conditions:** Shifts in the global economy, such as trade agreements or economic downturns, may affect Bangladesh's infrastructure investment and consumer spending trends.

Together, these elements have an impact on ISPs' strategic choices and have the power to alter the competitive environment of the Bangladeshi market.

2.5 Technological Factors

The following technological elements have an impact on Bangladesh's ISP market:

i. **Infrastructure Development:** Broadband and fiber optic network growth improves service reliability, speeds, and connectivity.

ii. **Developments in Mobile Technology:** The debut of 4G and the impending arrival of 5G technology are changing the mobile internet access market, improving demand and user experience.

iii. **The Internet of Things (IoT):** As IoT applications expand, there is an increasing need for reliable internet services to enable smart devices and linked solutions in a variety of industries.

iv. **Cloud Computing:** As cloud services become more widely used, ISPs are compelled to give businesses that depend on cloud solutions more bandwidth and dependable connectivity.

v. **Cybersecurity Developments:** In order to safeguard user data and foster customer trust, ISPs must make significant investments in cybersecurity measures as data security becomes increasingly important.

vi. **Electronic Payment Methods:** ISPs must guarantee smooth and secure internet connections for transactions due to the growth of digital payments and e-commerce.

vii. **Content Streaming Services:** As online streaming platforms gain traction, there is a greater need for high-speed internet; ISPs frequently combine services to draw clients.

2.6 Political, Legal, and Regulatory Factors

2.6.1 Political Factors:

The political factors of the ISP industry are discussed below:

i. **Government Control & Regulation:** Through a number of laws and rules, particularly related to internet infrastructure and service provision, the Bangladeshi government has a major impact on the ISP sector. The government is essential to maintaining national security, controlling internet censorship, and overseeing public internet access.

ii. **Digital Bangladesh Vision:** The government has encouraged ISP growth and widespread internet access throughout the nation under the "Digital Bangladesh" initiative. Through the promotion of technology adoption and e-governance, the vision seeks to establish Bangladesh as a knowledge-based society.

iii. **Cybersecurity Issues:** As internet usage increases, national security concerns have arisen, prompting laws governing data privacy, internet monitoring, and the government's blocking of specific online content it deems inappropriate.

iv. **Political Instability:** Strikes (hartals) and political unrest can interfere with ISP operations and interfere with the deployment of internet infrastructure, which can impact the expansion and quality of services generally.

2.6.2 Legal Factors:

The legal factors of the ISP industry are discussed below:

i. **Telecommunication Act 2001:** This is the main law that regulates Bangladesh's telecommunications sector, which includes the ISP sector. It creates the legal foundation for service provider competition, licensing, and regulation.

ii. **Data Protection and Privacy Laws:** Bangladesh's legal framework pertaining to data privacy and protection is developing, and ISPs are required to abide by rules pertaining to the gathering, storing, and sharing of user data. Additionally, there are increasing calls for data protection laws to be enforced more strictly.

iii. **Intellectual Property Laws:** In order to make sure that their service offerings do not contravene copyright, patent, or trademark laws pertaining to online content, ISPs in Bangladesh must navigate the legal environment surrounding intellectual property rights.

iv. **Consumer Protection Laws:** In order to guarantee fair pricing, clear billing, and excellent service, ISPs are required to abide by consumer rights laws. Enforcing consumer protection laws in the industry is a major responsibility of the Bangladesh Telecommunication Regulatory Commission (BTRC).

2.6.3 Regulatory Factors:

The regulatory factors of the ISP industry are discussed below:

i. **Bangladesh Telecommunication Regulatory Commission (BTRC):** This is the main regulatory agency in charge of managing spectrum allocation, monitoring the ISP industry, and ensuring adherence to telecom regulations. Additionally, it guarantees that ISPs follow service quality guidelines.

ii. **Licensing and Compliance:** Strict licensing requirements for ISPs are part of the regulatory environment. Businesses must apply for licenses from BTRC in order to operate, and the regulatory body keeps an eye on whether national internet service standards are being followed.

iii. **Net Neutrality:** In Bangladesh, there has been an increase in awareness of the need for ISPs to handle all internet traffic equally and without bias. Clear guidelines on this issue are being established by the government and regulatory agencies.

iv. **Internet Censorship:** If a website or online service is judged to be harmful or against the interests of the country, the government may block or restrict access to it. ISPs are required to follow these directives in order to preserve public safety and order.

2.7 Barriers to Entry

The barriers to entry of the ISP industry are discussed below:

i. **High Capital Investment:** To guarantee service delivery in both urban and rural areas, starting an ISP necessitates a sizable upfront investment in infrastructure, such as fiber optics, data centers, network equipment, and technology. New competitors, particularly smaller ones, may be discouraged by this high initial cost.

ii. **Licencing and Regulatory Requirements:** In order to operate, ISPs must obtain licenses from the Bangladesh Telecommunication Regulatory Commission (BTRC). Complying with numerous legal and regulatory requirements is part of the demanding licensing process. These include consumer protection laws, technical standards, and infrastructure quality, all of which can be expensive and time-consuming for newcomers.

iii. **Market Dominance by Established Players:** It is difficult for new entrants to compete in Bangladesh's internet services market because it is dominated by a small number of powerful companies. Due to their large customer bases, well-established brand recognition, and economies of scale, these established ISPs leave little room for new competitors.

iv. **Limited Spectrum Availability:** In order to offer wireless internet services, ISPs need access to a restricted spectrum, which can be costly and difficult to obtain. New ISPs face obstacles due to existing operators' competition for this scarce resource and regulatory restrictions on spectrum allocation.

v. **Infrastructure Access:** Building the infrastructure required to provide wireless or broadband services can be a major challenge. This entails getting approval to install cables, utilize public areas, and connect to already-existing telecom infrastructure. Usually, established ISPs have easier access to these resources.

vi. **Technological Barriers:** Due to the quick development of technologies like 5G, fiber optics, and broadband services, new competitors must possess state-of-the-art equipment and knowledge. New competitors may find it difficult to provide competitive services if they lack access to cutting-edge technology.

vii. **Regulatory Compliance and Data Security:** Strict cybersecurity and data protection laws must be followed by new ISPs. These regulations are frequently subject to change, and any violations may result in fines or the revocation of operating permits.

viii. **High Operational Costs:** Maintaining an ISP entails significant ongoing expenses for customer support, network upkeep, and guaranteeing service dependability. It may be difficult for new competitors to cover these overhead expenses while keeping prices low.

2.8 Supplier Power in the ISP Industry of Bangladesh

The term "supplier power" describes the influence that suppliers—such as manufacturers of equipment, network infrastructure, and data center services—have over the ISP sector. The degree of supplier power in Bangladesh is influenced by a number of factors.

i. **Infrastructure Providers and Network Equipment**

Strong Supplier Power: Fiber optic cable companies and network hardware suppliers account for a sizable amount of the ISP industry's supply chain. Because there aren't many high-quality network infrastructure and hardware suppliers in Bangladesh, the few that are available have more negotiating leverage. For cutting-edge networking hardware and software, ISPs are forced to depend on a select group of international vendors, such as Cisco, ZTE, and Huawei. Because of this concentration of suppliers, they have more sway over ISPs, particularly when it comes to equipment availability and pricing.

ii. **Limited Spectrum Availability for Network Equipment and Infrastructure Providers**

Moderate Power of Suppliers: The Bangladesh Telecommunication Regulatory Commission (BTRC) oversees the distribution of wireless spectrum in Bangladesh. ISPs use this finite resource to provide wireless broadband services, even though the government controls the spectrum supply. The government's distribution of the limited spectrum gives the BTRC, which functions as a quasi-supplier, considerable influence over ISPs, limiting their capacity to develop or broaden their service portfolios. In order to obtain spectrum, ISPs must bargain with the regulatory agency, which gives the supplier more clout in the market.

iii. Wholesale Bandwidth Providers

Moderate to High Supplier Power: For internet bandwidth, many Bangladeshi ISPs rely on bigger regional and international wholesalers. Given that the cost of internet bandwidth can vary based on market conditions, companies that offer wholesale international bandwidth have significant supplier power. The cost and quality of bandwidth supplied by international providers has a direct impact on the operational costs of ISPs in Bangladesh, as local ISPs typically rely on them for global connectivity.

iv. Electricity and Power Providers

Low Supplier Power: The ISP sector depends on power supplies, particularly for maintaining network operations and operating data centers. ISPs frequently have backup generators and other procedures in place to handle power outages, even though the electricity supply in Bangladesh can be erratic in some areas. Even though energy costs can still affect operating expenses, the power supply's influence over ISPs is therefore less than that of other suppliers.

v. Technological and Service Providers

Moderate Supplier Power: Specialized technology and service providers are frequently the source of the technological innovations needed by an ISP to maintain its competitiveness, such as 5G networks, high-speed internet, and enhanced customer support platforms. The providers

of these technologies have some influence over ISPs since they can use the growing demand for their services to bargain for higher prices.

A number of factors, such as the dependence on equipment, infrastructure, international bandwidth, and spectrum access, affect supplier power in Bangladesh's ISP sector. ISPs typically have more negotiating power in areas like power supply and content delivery services, even though suppliers in some industries, like network hardware and bandwidth, have significant influence.

2.9 Buyer Power in the ISP Industry of Bangladesh

The influence that consumers—both individual and corporate clients—have on the market is known as buyer power. Buyer power in Bangladesh's ISP sector can fluctuate based on a number of variables, including customer preferences, the presence of substitute service providers, and market competition.

i. **The presence of substitutes (competition):** High Buyer Power, the existence of several ISPs in Bangladesh, including Robi, Banglalink, CityCell, Grameenphone, and other regional players, strengthens buyer power. Customers are more price sensitive and demanding higher-quality services because they have more options when choosing an ISP. In order to keep consumers, ISPs are compelled by this competition to provide better offers, enhanced customer support, and dependable internet speeds.

ii. **Price Sensitivity:** High Buyer Power, Bangladeshi consumers are very price sensitive. Affordable internet plans are a top priority for many consumers, especially in rural and semi-urban areas, giving them significant pricing power. In order to draw and keep customers, ISPs are frequently compelled to provide competitive pricing, promotions, and bundles. Customers now have more options thanks to the expansion of mobile internet services, which increases their power even more.

iii. **Switching Costs:** Moderate to High Buyer Power, Customers in Bangladesh have comparatively low switching costs. If customers are unhappy with the service or discover a better offer elsewhere, switching ISPs is simple. ISPs are under pressure to offer alluring deals and first-rate customer support in order to keep customers from leaving because switching is so inexpensive. However, in rural areas, where there may be fewer ISPs, some customers might encounter difficulties, which would marginally reduce their purchasing power.

iv. **Government and Business Clients:** High Buyer Power, Due in large part to their data and communication requirements, businesses and government organizations are major users of internet services. Because of the importance of their services and the volume of their demands, these clients typically have a lot of bargaining power. In order to secure long-term contracts and customize services to meet their unique needs, ISPs must engage in negotiations with these buyers. In these negotiations, reliability, data volume, and service level agreements (SLAs) are crucial considerations.

v. **Service Expectations:** High Buyer Power, As internet usage rises in Bangladesh, customers' awareness of the quality of the services they receive is growing. Better customer service, dependable connectivity, and faster internet are what many consumers are searching for. Customers have the power to demand better service for the money they pay because ISPs are constantly under pressure to meet or surpass these service expectations due to the abundance of alternatives.

vi. **Mobile Internet Substitution:** High Buyer Power, Buyer power has changed as a result of Bangladesh's expanding mobile internet services (via networks like 4G provided by mobile carriers like Grameenphone, Robi, and Airtel). Depending on price and convenience, customers can quickly move between mobile and home broadband, giving them more negotiating power with fixed broadband ISPs.

Due to factors like price sensitivity, low switching costs, fierce competition, and the growth of mobile internet options, buyer power is fairly strong in Bangladesh's ISP market. To meet the needs of their clients, ISPs must constantly innovate, keep prices competitive, and enhance service quality. Due to the high volume of services needed, business clients in particular have a lot of sway, but individual customers also have a lot of options that give them more negotiating leverage.

2.10 Threat of Substitutes in the ISP Industry of Bangladesh

Customers are likely to move to other services that meet the same need, like internet access, but are offered by different technologies or service models. This is known as the threat of substitutes. The following factors make substitutes a moderate to high threat to Bangladesh's ISP industry:

i. **3G, 4G, and 5G network mobile internet:** High threat, one of the biggest alternatives to traditional broadband services in Bangladesh is mobile internet. As 3G, 4G, and the soon-to-be 5G networks grow quickly, mobile broadband is becoming a more practical and cost-effective choice for customers. With the increasing number of reasonably priced smartphones and mobile internet packages available, people can now access the internet without requiring fixed broadband connections. Given that it can be expensive to install fixed broadband infrastructure in rural and suburban areas, this has particularly impacted these areas. Due to its flexibility and cheaper setup costs, mobile internet is preferred by many users.

ii. **Satellite Internet:** Moderate threat, in certain regions of Bangladesh, satellite internet services, like those provided by companies like Starlink (which plans to grow its services internationally), are gradually becoming available. Satellite internet may be a viable substitute, even though it is currently a specialized service, particularly in underserved or remote locations with limited terrestrial broadband infrastructure.

iii. **Fiber Optic to the Home (FTTH):** Minimal threat, even though fiber-to-the-home (FTTH) is a component of the larger broadband service model, it can be thought of as an alternative to more traditional technologies like cable broadband or DSL. Customers may decide to switch from outdated services to FTTH due to its faster speeds and greater dependability.

iv. **Wi-Fi Hotspots:** Moderate threat, for customers who require internet access for brief periods of time, public Wi-Fi hotspots in cafes, libraries, shopping centers, and other public areas offer an alternative. However, when compared to home broadband services, these services' speed, security, and dependability are typically worse.

Because of the increasing popularity of mobile internet and new satellite services, the threat of substitutes is moderate to high. To compete with these alternatives, fixed broadband ISPs must keep coming up with new ideas, providing competitive pricing, and improving service quality.

2.11 Industry Rivalry in the ISP Industry of Bangladesh

The level of competition between businesses operating in the same industry is referred to as industry rivalry. There is fierce competition in Bangladesh's ISP sector for a number of reasons:

i. **The number of competitors:** There are a number of companies providing both fixed and mobile broadband services in Bangladesh's reasonably competitive ISP market. BDCom, Wi-Tribe, Grameenphone (GP), Banglalion, and others are major players in the fixed broadband market. Grameenphone, Robi, Airtel, and Banglalink control the majority of the mobile internet market. The emergence of new competitors, particularly as the need for internet services has grown, creates a highly competitive atmosphere.

ii. **Price Competition:** High Rivalry, ISPs usually use aggressive pricing strategies to draw in new customers because many customers are price-sensitive, particularly in Bangladesh's price-sensitive market. As businesses look to set themselves apart,

discounts, bundles, and promotional offers are typical. This fierce price competition can reduce ISP profit margins, intensifying the competition.

iii. **Technology and Service Differentiation:** Intense Competition, businesses in Bangladesh are always vying for customers' attention, faster internet speeds, and cutting-edge technological solutions like fiber optics and 4G/5G networks. Since ISPs must update their infrastructure and services to remain competitive, the ongoing need for innovation intensifies competition.

iv. **Customer Retention** Getting new customers is expensive, and ISPs face a big problem with customer attrition. In order to preserve long-term client relationships, ISPs make significant investments in enhanced customer support, value-added services, and better service offerings. The rivalry is heightened by this continuous struggle for client loyalty.

v. **Government and Regulatory Influence:** Moderate Rivalry, The Bangladesh Telecommunication Regulatory Commission's (BTRC) role in industry regulation also has an impact on rivalry. New rules that affect pricing or spectrum allocation, for example, have the potential to change the competitive environment and affect how businesses compete for market share.

There are many competitors, fierce price competition, constant technological advancements, and the need to retain customers, all of which contribute to the high level of industry rivalry in Bangladesh's ISP sector.

2.12 Summary of Challenges and Opportunities in the ISP Industry of Bangladesh

The summary of challenges and opportunities in the ISP industry of Bangladesh is described below:

Challenges in the ISP Industry of Bangladesh

i. **Infrastructure and Investment Costs:** The high expense of developing infrastructure is one of the main issues facing ISPs in Bangladesh. Broadband network establishment necessitates a large investment in fiber optics, data centers, and network equipment, particularly in rural areas. ISPs can have unreasonably high initial capital costs, which makes it difficult for smaller firms to compete with more established behemoths.

ii. **Licensing and Regulatory Obstacles:** ISPs have to manage the regulatory framework established by the Bangladesh Telecommunication Regulatory Commission (BTRC), which includes acquiring licenses, adhering to standards, and handling modifications to the law. The regulatory framework and licensing procedure can occasionally be onerous and slow, which makes it difficult to enter and grow a market.

iii. **Price Sensitivity and Market Competition:** Many companies are providing both fixed and mobile broadband services in Bangladesh, making the ISP market extremely competitive. Price competition is fierce because consumers are price-sensitive, particularly in developing nations. ISPs frequently have to lower prices or provide discounts, which affects market sustainability and profitability.

iv. **Service Quality and Client Expectations:** Another challenge is keeping up with the increasing demands for dependable, fast internet. Rural communities still have few options for connectivity, which causes discontent, even though urban areas may have access to cutting-edge services like fiber-optic broadband. In order to meet customer demands for improved service and dependability, ISPs must constantly enhance the quality of their networks.

v. **Limited Spectrum Availability:** In Bangladesh, there is a shortage of spectrum for wireless broadband and mobile services, and it can be difficult for newcomers to acquire spectrum licenses. The expansion of services may be hampered by this spectrum scarcity, especially for mobile broadband providers.

vi. **Power Supply Problems:** In some parts of Bangladesh, power dependability is still an issue. Even though ISPs frequently have backup power options, network stability, and service delivery may be impacted by erratic electricity supplies, especially in rural areas.

Opportunities in the ISP Industry of Bangladesh

i. **Increase in Internet Penetration:** Thanks to government programs like the Digital Bangladesh project, internet penetration in Bangladesh is rising quickly. ISPs have a great chance to grow their clientele thanks to this, particularly in underserved rural and isolated areas. The expansion of Internet services is also aided by the rise in the use of mobile devices.

ii. **Government Support and Initiatives:** The Digital Bangladesh initiative encourages the growth of internet access throughout the nation by providing ISPs with a policy environment that is favourable to them. Demand for internet services is rising as a result of the government's push for digital transformation, particularly for online services, e-commerce, and digital education.

iii. **5G Rollout:** ISPs have a new chance to offer next-generation services with Bangladesh's impending 5G rollout. ISPs can access new market niches like smart cities, IoT (Internet of Things), and enterprise-level connectivity thanks to 5G's faster speeds and reduced latency.

iv. **Growth of the Rural Market:** Rural and semi-urban areas have a sizable unexplored market. ISPs have the chance to expand their broadband services outside of cities as mobile internet penetration keeps growing, especially with wireless and mobile broadband technologies. Providing these areas with reasonably priced internet packages can greatly accelerate market expansion.

v. **Demand for High-Speed Internet:** The need for high-speed internet services, such as fiber optics and cutting-edge broadband technologies, is growing as consumers, businesses, and educational institutions look for better and faster internet connections. ISPs will have a competitive advantage if they can provide exceptional service quality, speed, and dependability.

vi. **Developments in Technology:** New growth opportunities are presented by the continuous technological advancements, such as cloud computing, VoIP (Voice over Internet Protocol), and fiber-optic broadband. ISPs can expand the range of services they offer by bundling services like TV, phone, and internet or even branching out into new markets like e-health or e-education.

Significant obstacles, including high infrastructure costs, regulatory barriers, fierce market competition, and differing customer expectations, confront Bangladesh's ISP sector. Significant opportunities do exist, though, such as the potential for rural market expansion, the rollout of 5G networks, government support for digital initiatives, and rising internet penetration. ISPs will be in a strong position to grow in the Bangladeshi market going forward if they can take advantage of technology breakthroughs and enhance service quality.

Chapter Three: Analysis of the Organization

3.1 Overview and History

Originally founded as Dhakacom LTD in 1997, Amber IT is a prominent internet service provider in Bangladesh. The business changed its name to Amber IT LTD in 2015 to better represent its 1996-founded parent company, AMBER GROUP. Their office resides at 7th and 13th floor, Navana Tower, Gulshan-1, Dhaka.

Amber IT Ltd is a leading internet service provider (ISP) in Bangladesh that provides a range of internet connectivity and data services. Amber IT offers services such as: Corporate internet and data connectivity, home internet, IP telephony services, Secured hosting and web development, and Business-class voice and data services.

In December 2023, Bangladesh had about 12 million broadband users, and the number is growing daily. Amber IT serves 0.76% of these users, which is a very large number of clients. To support and serve these 9120000 clients, Amber IT has integrated its own huge server setup and also developed its software and developer department.

Amber IT has created a national, fully resilient, MPLS network and continuously tests and adopts emerging communications platforms.

3.2 Trend and Growth

Since its founding in 1997, Amber IT has advanced significantly. Initially offering local businesses dial-up and radio link Internet access, they have steadily and naturally expanded into a communications provider offering a wide range of business-class voice and data services. According to some reports in December 2023 Amber IT was serving around 9120000 clients.

3.3 Customer Mix of AmberIT

In Bangladesh, an Internet service provider (ISP) usually caters to a variety of clientele, each with unique requirements and traits. The varied market segments that use internet services for a range of reasons, from personal to business needs, are reflected in an ISP's customer mix. An overview of the main clientele groups for a Bangladeshi ISP 'AmberIT' is provided below:

i. **Individual consumers, or residential customers**

Description: Households in this segment use internet services for social media, entertainment, communication, online learning, and shopping, among other personal uses.

Client requirements:

- Fast internet for bandwidth-intensive activities like gaming and streaming.
- Plans that are affordable and accommodate different budgets.
- Dependable service with little interruption.
- Customer service for technical help and troubleshooting.

Features:

- Younger age groups, such as Gen Z and millennials, are generally more likely to be active users.
- The growth of online learning and remote work has raised demand for home broadband, and customers are looking for deals and competitive prices.

ii. **SMEs (small and medium-sized businesses)**

Description: Because SMEs depend on dependable and effective internet connectivity to conduct daily operations, including communications, cloud services, and e-commerce, they represent a significant customer segment for ISPs.

Client requirements:

- Fast internet for cloud computing, file sharing, and video conferencing, among other business functions.
- Internet plans that can be scaled to meet changing needs and expansion.
- Business-grade security measures to safeguard private data.
- Committed customer service that promptly addresses service interruptions.

Features:

- Diverse technical skill levels; certain companies might require more thorough technical assistance.
- Cost-effectiveness is frequently valued while maintaining dependable, continuous service.
- Growing demand for business-specific services such as virtual private networks (VPNs) and leased lines.

iii. Large Industries and Corporate Customers

Description: This market segment consists of big businesses and multinational conglomerates that need a strong internet infrastructure to support their extensive network of operations, which includes mission-critical apps, remote offices, and massive data transfers.

Client requirements include:

- Dedicated, lightning-fast internet connections with uptime guarantees provided by Service Level Agreements (SLAs).
- Cutting-edge services like cloud computing, dedicated leased lines, and virtual private networks (VPNs).
- Scalability to accommodate rising bandwidth needs as the company expands.

Strict security protocols for safe communication and data protection.

Features:

- Frequently call for specially designed internet solutions to satisfy particular business requirements.
- Their operations are heavily dependent on connectivity and uptime.
- They value dependability and excellent customer service, and they can afford premium services but are also extremely frugal.

iv. Academic Establishments

Description: With the growth of online education, educational institutions like schools, colleges, universities, and online learning platforms are important clients for ISPs in Bangladesh.

Client requirements:

- Constant, fast internet access for online tests, e-learning platforms, and virtual classrooms.
- Scalable packages that, particularly in larger institutions, can accommodate several users at once.
- Secure networks to safeguard private academic and student information.

Features:

- The need for dependable internet has grown as a result of the growing demand for digital learning resources.
- They may look for special packages designed for educational use, but they are price-sensitive due to limited budgets. They frequently look for long-term contracts to guarantee consistent services for both staff and students.

v. The Public Sector and Government

Description: For operations, data storage, communication, and citizen services, the public sector—including government offices and agencies—needs dependable internet services.

Needs of the client:

- Strong security features and high-performance internet infrastructure.
- Committed customer service for upkeep and troubleshooting.
- Special prices or benefits connected to the government.

Features:

- Frequently call for specialized internet plans that can grow with the expansion of government services.
- Concerns about data privacy and security are crucial.
- Through bids and contracts with the public sector, pricing may be negotiated.

vi. Digital platforms and online shopping

Description: In order to manage customer interactions, process payments, handle enormous volumes of data, and run their operations efficiently, e-commerce companies, digital service providers, and online platforms also rely significantly on internet services.

Client requirements:

- A dependable, quick internet that can manage large amounts of traffic, payment gateways, and online transactions.
- Strong infrastructure to guarantee constant uptime, particularly during times of high demand like sales events.
- Safe communication and data security for client and company information.

Features:

- These clients might require scalable, superior internet solutions.
- To improve the customer experience, they might need fast upload/download speeds and low latency.

vii. Media companies and content producers

Description: This group consists of news organizations, media companies, influencers, and content producers who rely on fast internet for content distribution, streaming, and video uploading.

Client requirements:

- Fast internet for content production, live streaming, and uploading big video files.
- Consistent and dependable services to guarantee seamless media operations and online broadcasting.
- Private, secure networks to protect intellectual property.

Features:

- Typically, high bandwidth plans with unlimited data or high data caps are needed.
- Digital broadcasting and content production require the highest levels of performance and dependability.

viii. Development Agencies and Non-Governmental Organizations (NGOs)

Description: For communication, research, and monitoring purposes, non-governmental organizations (NGOs) operating in Bangladesh—particularly those engaged in community outreach, development, and educational initiatives—need dependable internet services.

Client Requirements:

- Economical online solutions for business requirements.
- Remote or rural areas can be served by Internet solutions; pricing options are flexible and scalable to meet changing needs.

Features:

- Frequently give social impact and affordability precedence over upscale features.

- Need dependable internet in order to maintain contact with distant field offices or nearby communities.

An ISP company in Bangladesh serves a wide range of clients, from small businesses and individual consumers to government agencies, educational institutions, and large corporations. ISPs must provide customized solutions that range from enterprise-grade business solutions to affordable residential plans in order to meet the unique needs of each of these segments. Designing efficient service offerings that satisfy the needs of Bangladesh's dynamic market requires an understanding of the various customer segments and their requirements.

3.4 Product/Service mix

Internet Services for Homes

The business provides dependable, fast home internet services that are tailored to each household's unique requirements. The service offers reliable connectivity with a range of packages to suit different usage needs and budgets, whether for streaming, online gaming, remote work, or casual browsing. Families can enjoy uninterrupted online experiences with a focus on smooth installation and 24/7 customer support. The service is a great option for contemporary homes because it is supported by cutting-edge technologies that guarantee robust coverage and little downtime.

Internet Services for Corporates

Corporate internet services are designed to satisfy the exacting needs of companies of all kinds. The business offers enterprise-grade security and dependability along with dedicated, fast internet connections. Large-scale data transfers, video conferencing, mission-critical applications, and other bandwidth-intensive operations are all supported by these services. In order to guarantee optimum performance and continuity, businesses also profit from Service Level Agreements (SLAs), customized packages, and specialized account management. By

emphasizing scalability, the service expands with the company and changes to meet its changing requirements.

Internet services for small and medium-sized businesses (SMEs)

The company provides small and medium-sized businesses with robust and reasonably priced internet solutions that enable them to remain competitive in the digital era. These packages are designed to strike a balance between performance and cost-effectiveness, allowing SMEs to function effectively without sacrificing quality. The service offers scalable options to support business growth, whether it's for managing cloud apps, running e-commerce platforms, or supporting multiple devices. In order to handle their particular difficulties, SMEs also gain from prompt installation, adjustable pricing structures, and attentive customer support.

PABX Cloud Services

By providing a cloud-based phone system that does not require on-premise hardware, the company's Cloud PABX (Private Automatic Branch Exchange) solution transforms business communications. With the help of this service, companies can manage calls with ease, combine several branches into a single system, and take advantage of features like voicemail, conference calls, and call forwarding. Employee mobility and remote work are encouraged by increased flexibility, which allows them to connect from any location. Because of the solution's high scalability, affordability, and security, businesses of all sizes can communicate effectively.

Services for IP Phones

The company's IP Phone services offer state-of-the-art voice communication via internet-based technology, with better call quality and lower costs than traditional phone lines. This service, which was created for contemporary businesses, offers cutting-edge features like video calling, call analytics, call recording, and CRM system integrations. IP phone solutions are perfect for companies looking to update their communication infrastructure because they are simple to set

up and operate. VoIP (Voice over Internet Protocol) is used to provide flexibility and scalability for changing business requirements.

3.5 Operations

In Bangladesh, an Internet service provider's (ISP) operations encompass a variety of tasks, from customer service and regulatory compliance to infrastructure development and service delivery. Residential users, small and medium-sized businesses (SMEs), large corporations, educational institutions, government agencies, and non-governmental organizations are among the varied clientele served by internet service providers (ISPs) in Bangladesh. An outline of the main functional elements of a Bangladeshi ISP company can be found below:

i. Development and Administration of Network Infrastructure

Description: The network infrastructure of an ISP serves as the foundation for its operations, allowing for the provision of internet services to clients. In order to deliver high-speed internet and preserve service quality, ISPs in Bangladesh must make investments in a reliable, scalable, and secure network.

Important Tasks:

- Core Network Setup: Putting in place a central network infrastructure that includes data centers, switches, and routers with large capacities.
- Last-Mile Connectivity: Providing end users with internet access through wireless technologies (Wi-Fi, 4G, LTE, or fixed wireless) or wired connections (fiber optic, DSL, cable).
- Peering and Transit: Enabling data transfer from local users to global servers by establishing connections with international internet exchanges and other ISPs. Peering agreements, international bandwidth leasing, and collaboration with subsea cable providers are all included in this.

- Maintenance and Upgrades: To satisfy the growing demand for bandwidth and guarantee continuous service, the network is continuously upgraded. To minimize downtime and deal with possible bottlenecks, routine maintenance is essential.

ii. Technologies for Service Delivery and Access

Description: Depending on the region and the particular requirements of the client segments, an ISP uses a variety of technologies to provide internet services to its clients.

Important Tasks:

- Fiber-to-the-home (FTTH) and fiber-to-the-building (FTTB) technologies are being used more and more in urban areas to deliver high-speed internet.
- Digital Subscriber Line (DSL): DSL technology is still widely used for internet access through phone lines in many places, especially in suburban or rural areas.
- Fixed Wireless and 4G/LTE: ISPs frequently use wireless networks, like Wi-Fi or LTE, for last-mile connectivity in places with little fiber infrastructure.
- Wi-Fi Hotspots: Setting up public Wi-Fi hotspots in busy urban areas, such as malls, airports, and coffee shops.

iii. Product Development and Service Provision

Description: In order to satisfy the demands of various client segments, ISPs create and provide a range of plans and products.

Important Tasks:

- Residential Plans: ISPs provide individual customers with flexible, reasonably priced internet packages for social media, streaming, gaming, and general browsing. Plans are typically priced according to data limits and speed (Mbps).

- Business Solutions: ISPs offer Virtual Private Networks (VPNs), higher-speed broadband services, dedicated leased lines, and other customized business solutions to SMEs and large corporations.
- Bundled Services: A lot of ISPs also provide discounted internet, TV, and VoIP services in bundled packages.
- Corporate and Enterprise Solutions: Specialized packages for big businesses that include cloud services, cybersecurity solutions, high-capacity internet, and committed customer service.
- Value-added Services: A few ISPs provide extra services like cloud storage, email, web hosting, and assistance with digital marketing for companies.

3.6 SWOT Analysis

SWOT analysis is a must for every business if the company intends to grow in the future. The SWOT analysis for AmberIT is shown below:

Strengths:

Market Leader: Well-known brand with a solid reputation as a leading ISP. The solid reputation helps acquire new customers more easily. Whenever a potential customer thinks to get an internet line psychologically, they automatically rely on the available leading brands. Thus, this helps AmberIT to gain customers trust which ultimately becomes a strength.

Diverse Service Offerings: Offers a variety of services, such as corporate solutions, dedicated internet, and broadband. By offering variety of services AmberIT easily penetrates into the whole isp industry's customers. By being able to serve the mass consumer results earning huge amount of revenue.

Sturdy Infrastructure: Investing in cutting-edge network infrastructure guarantees dependable, fast internet access. This sturdy infrastructure helps AmberIT to provide seamless internet

connection to their consumers which leads to 100% customer satisfaction and a great review in marketplace.

Customer Support: Excellent customer satisfaction is achieved through robust customer service and support systems. Internet service is provided through a very critical supply chain to the consumers. Sometimes the line gets disconnected or supply a very low speed internet and this can occur anywhere of the critical supply chain. AmberIT's robust customer service and support is always responsive to their customer's complain or any other queries. The customer service is very fast in their response and actions which lead to the customer satisfaction.

Innovation: The dedication to implementing new services and technologies, like 5G and fiber optics. Implementation of new technologies, helps AmberIT to keep a leap ahead of their competitors.

Weaknesses:

Pricing Competition: The potential for both new and established competitors to use aggressive pricing tactics. While providing the best service its very hard to offer a service at very cheap price, AmberIT provides quality and quality comes with a price. But this gives advantages to the competitors who are offering at cheaper rate while compromising some quality.

Service Availability: Rural areas have limited coverage, which could limit prospects for expansion. There are areas that cannot be served by AmberIt because of either political pressure to run beneficiary's monopoly business or unavailability of proper infrastructure such as electricity, tower or etc. Which is a great barrier to the expansion of AmberIT's business.

Infrastructure Dependency: Significantly dependent on physical infrastructure, which can be expensive and time-consuming to upgrade. To provide high quality service the physical infrastructure needs to be upgraded time to time and this upgradation requires huge number of

investments which increases the company's fixed costs, ultimate result is higher price points and less revenue.

Regulatory Challenges: Managing laws and rules can be difficult and have an effect on business operations. The laws and rules of doing isp business in Bangladesh is quite difficult and critical. Sometimes company has to pay off the record which is a financial stress for the company. Also company has to deal with many risky political threats.

Opportunities:

Growing Demand: As remote work and digital services become more popular, there is a growing need for high-speed internet. As the demand of internet is growing day by day there will great opportunity for AmberIT to grab more customers and expand their business.

Expansion: Possibility of reaching underprivileged regions and gaining new clientele. Due to globalization the government is also doing best to make available internet into the rural areas. This gives AmberIT the opportunity to expand.

Partnerships: Possibilities to improve service offerings through strategic alliances with tech companies. The internet service is provided by a critical supply chain which consists International Internet Gateway, Bandwidth provider, Internet service provider etc. companies. Building strategic alliances with the other companies in the supply chain AmberIT can have opportunity to improve their offering.

Emerging Technologies: New revenue streams can be generated by investing in cutting-edge technologies like the Internet of Things and smart home services. By investing in new technologies AmberIT can serve new offerings to their customers which will give them first mover advantage in that segment.

Threats:

Tough Competition: Growing rivalry between long-standing ISPs and recent market entrants.

Economic Factors: Consumer expenditure on internet services may be impacted by downturns or fluctuations in the economy.

Cybersecurity Risks: Growing cybersecurity risks have the potential to erode consumer confidence and reputation.

Regulatory Changes: Operations may be impacted by modifications to laws governing pricing, service provision, or the use of technology.

AmberIT Ltd's place in the Bangladeshi ISP market is highlighted by this SWOT analysis, which also highlights the company's strengths and areas for improvement.

3.7 Steps or Strategies to Meet the Challenges and Opportunities

The steps or strategies to meet the challenges and opportunities are discussed below:

I. **Pay Attention to Infrastructure Development**

   Challenge: Exorbitant infrastructure expenses, particularly in rural regions.

   Strategy: To increase internet speeds, service dependability, and coverage, make investments in growing mobile broadband infrastructure and fiber-optic networks. Pay attention to underserved and rural areas, where there is a growing need for internet but insufficient infrastructure.

   Tactics: Collaborate on rural development projects with regional administrations or groups. Make use of public-private partnerships to split the expense of building new infrastructure. Utilize government programs such as Digital Bangladesh to obtain incentives and lower operating costs.

II. **Enhance Customer Experience and Service Quality**

   Challenge: Fulfilling consumer demands for dependable, fast internet.

   Strategy: Create a customer-focused strategy by providing excellent internet services, prompt customer service, and ongoing network enhancements.

Tactics: Provide round-the-clock customer service, use predictive maintenance to fix network problems, and keep an eye on service performance to avoid outages. Make sure that the increasing demand for faster speeds is reflected in network upgrades. To ensure effective service delivery and problem solving, invest in automation and AI-driven systems.

III. **Expand Service Offerings (Value-Added and Bundling Services)**

Challenge: Price sensitivity and fierce competition.

Strategy: Bundle services like internet, IPTV, and VoIP at competitive prices to stand out from the competition and draw in devoted clients. Provide premium packages to companies that require more bandwidth.

Tactics: Provide businesses with value-added services like cybersecurity packages, managed IT services, and cloud storage. These services create new revenue streams in addition to making customers more loyal. Use tiered pricing structures and loyalty programs to honor devoted clients.

IV. **Use next-generation technologies, such as cloud services, IoT, and 5G.**

Challenge: Growing rivalry, saturated markets, and developing technology.

Strategy: Establish the business as a pioneer in cutting-edge technologies such as cloud computing, 5G, and the Internet of Things (IoT). Providing these cutting-edge services will give you a competitive advantage.

Tactics: Begin testing 5G networks on a small scale in cities and progressively grow to accommodate more users. Offer IoT solutions specifically designed for industries like manufacturing, smart homes, and agriculture. Form alliances with international cloud service providers to provide scalable, more effective internet-based solutions to businesses.

V. **Put an emphasis on digital literacy and customer education.**

Challenge: Insufficient internet literacy, particularly in rural regions.

Strategy: Invest in teaching consumers the advantages of fast internet and efficient usage techniques. Increased adoption rates and client loyalty may result from this.

Tactics: Plan workshops, digital literacy initiatives, and community outreach events. With an emphasis on the digital divide, collaborate with local government and educational institutions to provide rural communities with basic internet training. Provide clear instructions or video tutorials that show customers how to get the most out of their internet packages.

VI. Boost Data Protection and Cybersecurity

Challenge: Growing worries about data privacy and cybersecurity.

Strategy: Put strong cybersecurity measures in place to guarantee the safety of consumer data. In addition to safeguarding consumer data, this will foster trust and guard against harm to one's reputation.

Tactics: To defend against online attacks, update network security programs, firewalls, and encryption protocols on a regular basis. Provide security packages as extras for both individual customers and companies. To win over customers, implement adherence to local data protection laws and international data protection standards like the General Data Protection Regulation (GDPR).

VII. Brand positioning and aggressive marketing

Challenge: fierce price wars and competition.

Strategy: Create a strong brand identity by emphasizing customer satisfaction, dependable service, and distinctive value propositions like extra services and customer support.

Tactics: Employ focused digital marketing techniques (online advertising, social media) to connect with various clientele groups. To gain market share, provide limited-time sales or package discounts. Make the most of word-of-mouth marketing by rewarding current clients for referring new ones and providing referral bonuses.

VIII. Using Green Technologies for Sustainable Growth

Challenge: Sustainability and environmental effects.

Strategy: Incorporate green technologies into the ISP's business plan to lessen its environmental impact and win over eco-aware customers.

Tactics: Make investments in eco-friendly data centers, solar-powered network infrastructure, and energy-efficient equipment. In marketing campaigns, highlight the company's sustainability efforts to enhance its reputation. Collaborate with regional administrations and communities to decrease e-waste by implementing recycling initiatives or properly disposing of outdated equipment.

IX. Adjust to Shifting Customer Attitudes

Challenge: Changing consumer habits, like the growing preference for mobile internet over fixed broadband.

Strategy: Provide more accessible and flexible service options, particularly mobile broadband packages, to accommodate changing customer preferences.

Tactics: Emphasize postpaid services and offer reasonably priced mobile internet packages. Create plans specifically for mobile-first customers, particularly those who live in rural or isolated locations and might favor flexible and pay-as-you-go options. Increase customer engagement by providing mobile apps that let users easily access customer support, manage their accounts, and monitor data usage.

X. Collaborate with Government and Regulatory Bodies

Challenge: Regulatory compliance and obtaining spectrum licenses.

Strategy: To guarantee adherence to regional laws, cultivate a solid rapport with the Bangladesh Telecommunication Regulatory Commission (BTRC) and other regulatory bodies.

Tactics: To keep abreast of regulatory changes, take part in industry forums or public discussions. Promote government initiatives and incentives to increase broadband

availability in underserved areas. Communicate with legislators to secure support for growing internet infrastructure and to make sure that ISPs' interests are taken into account in regulations.

Companies must adopt a proactive strategy by concentrating on infrastructure expansion, technological innovation, and customer satisfaction if they want to succeed in the smart and quickly changing ISP sector. To overcome the obstacles and take advantage of the many growth prospects in the Bangladeshi market, it is essential to adopt new technologies, diversify offerings, maintain cybersecurity, and enhance marketing tactics. These tactics will enable long-term sustainability and success in addition to maintaining an ISP's competitive advantage.

Chapter Four: Internship Experience

4.1 Position, Duties and Responsibilities

My finance and accounts department internship at Amber IT Limited has been a priceless learning opportunity. This opportunity successfully bridged the gap between academic theories and real-world applications by allowing me to become fully immersed in the day-to-day operations of a top Internet service provider (ISP). The position of mine was Intern Finance and Accounts. I joined the position on February 2024 and the duration was three months. My duties and responsibilities for the first two months were financial postings, dealing with refunding the security deposits, recording the vendor's bill, preparation of payment vouchers. In the last month duty was to follow up on how the vat and tax section works.

4.2 Training

I received thorough training covering all of the essential components of financial management, such as budgeting, financial reporting, and accounting software usage. I gained tools from these sessions to improve my accuracy and productivity at work. I also took part in a variety of training courses during my internship to improve my comprehension of important financial ideas and procedures. Workshops on financial reporting strategies, the fundamentals of budgeting, and the efficient use of accounting software were all part of these programs. In order to gain a deeper understanding of the financial workflows unique to the ISP sector, I also participated in hands-on activities that focused on the practical implementation of theoretical concepts. In addition to enhancing my technical proficiency, this extensive training made it easier for me to integrate into the team and made sure I was ready to make a significant contribution to departmental projects.

4.3 Contribution to Departmental Functions

I assisted in preparing financial reports while making sure they were accurate and compliant with internal policies. Which increased the efficiency of the department. I also, oversaw financial transaction data entry while keeping accurate accounting records. This increased the accuracy of the accounting records of the organization. Again, I helped to process invoices, ensuring accuracy and expediting approval procedures. This helped the organization to speed up the workflow of the department. Also, I helped to process the Value Added Tax preparation (Musak 6.3) book. Which helped the tax and VAT section for make the audit process much faster.

4.4 Evaluation of Internship Performance

Although the organization did not have a formal evaluation process to evaluate my performance during my internship, my supervisor was crucial in providing me with regular and helpful feedback during my time in the finance department. After I finished each task or duty, my supervisor would carefully go over my work and offer perceptive observations. This feedback process was invaluable because it not only helped me identify the areas in which I had performed well but also pointed out the specific errors or flaws in my work.

My supervisor took a very supportive and growth-oriented approach. He would take the time to thoroughly explain any areas that required improvement so that I could see why they were important. He also gave me advice on how to practically address these deficiencies, providing tactics and ideas that improved my abilities and prevented me from making the same mistakes again. In addition to raising the caliber of my work, this continuous review process greatly aided in my learning and professional development.

4.5 Skills Applied

The skills I have applied in my internship program is discussed below:

Communication: As I was born and brought up in a high populated city there were always many people in my surroundings, which helped me to improve my communication skills. I used this skill to maintain sound communication with the team.

Working with responsibility: From my family I have learned that every work should be done responsibly no matter how small the work is. I applied this skill and did every task I was assigned very responsibly.

Punctuality: From my family I have learned to be punctual at every occasion. I used this skill to attend my office on time and finish my tasks before deadline.

4.6 New Skills Developed

There are many skills I have successfully developed through the internship program. Some of the most important skills that I developed are discussed below:

Professional Communication: Regular interaction with team members improved written and verbal communication abilities. There is a difference between regular communication and professional communication. Through the internship program, I have developed my professional communication skill.

Analytical Problem-Solving: By examining financial disparities and suggesting fixes, critical thinking skills were developed. While doing my internship, I was responsible for examining big financial data to suggest fixes. Through these procedures my analytical problem solving skill and critical thinking skill were developed massively.

Team Collaboration: Through meetings and cross-functional projects, teamwork and collaboration were encouraged. By attending meetings, and completing tasks in cross-functional projects I have learned how to collaborate in a team professionally and also learned how to note down meeting minutes.

4.7 Academic Skills Knowledge Applied

The academic skills and knowledge I have applied throughout my internship are discussed below:

Financial Analysis: During my academic life, I have learned many financial theoretical knowledge to evaluate financial data and use them to make strategic decisions. I used theoretical knowledge to evaluate financial data and make strategic decisions.

Team Collaboration: During my academic life I was involved in many group projects which helped me to learn how to work in a team. I used this skill to attend meetings and complete tasks of cross-functional projects that involved teamwork.

Excel Proficiency: During my academic life, I was taught how to use Excel more efficiently and effectively. I employed sophisticated Excel features for tasks involving data analysis and reporting.

Accounting Principles: During my academic life, I have learned the accounting principles that are mandatory to follow. To guarantee compliance in financial documentation, fundamental accounting principles were put into practice.

Chapter Five: Recommendations

5.1 Recommendations for Improving Self Performance

To find out how to improve self-performance I have done my own SWOT analysis.

Strengths: Ideal analytical abilities and process flexibility.

Weaknesses: Insufficient knowledge of the workflow of the industry. Unable to make complex strategic decisions.

Opportunities: Possibility of financial specialization and expansion within the ISP industry.

Threats: Continual skill development is necessary due to the rapid changes in technology.

From this analysis, I found that I should gain more deep knowledge of the workflow of the industry. I should gain knowledge from various business cases to learn more deeply about strategic decision-making. Moreover, I should continuously upgrade my skills according to the changes in technology to keep up pace with the increasing competition.

5.2 Recommendation for Workplace Improvement

For improving the workplace firstly I think, there is a need for an Introduction to new technologies, to speed up and maintain more accurate financial data organizations should introduce the use of the latest software to manage financial data storing and reporting. Secondly, there should be Improved Training Programs, to speed up employee onboarding and productivity, and increase the amount of training materials available to them. Thirdly, there should also be a Feedback Mechanism, establish organized avenues for interns to exchange ideas, encouraging a culture of progress. Finally, Cross-Departmental Initiatives to promote departmental cooperation to increase staff members' understanding of the company.

Chapter Six: Conclusion

My internship at AmberIT's finance department has been a worthwhile and rewarding experience. It gave me hands-on experience with the financial operations of a fast-paced, technologically advanced sector. I learned about important financial procedures like financial reporting, revenue analysis, forecasting, budgeting, and cost control during my stay here. Additionally, I gained a better understanding of how finance collaborates with other divisions to support the objectives of the business, especially in a fast-paced industry like telecommunications.

My analytical, problem-solving, and communication skills improved as a result of this internship, which enabled me to apply the theoretical knowledge I had learned in school to actual situations. I discovered how crucial accuracy, focus, and collaboration are to the organization's expansion and financial security. Furthermore, the advice and mentoring I received from seasoned experts was crucial in boosting my self-esteem and expanding my understanding of corporate financial management.

All things considered, this experience has not only strengthened my desire to work in finance but has also given me valuable information and abilities that I will effectively utilize in my future undertakings. In addition to my coworkers for their encouragement and support during my internship, I am thankful to the AmberIT for giving me this opportunity.

References

1. https://en.wikipedia.org/wiki/Internet_in_Bangladesh
2. https://www.researchgate.net/figure/Map-of-the-existing-fiber-optic-network-in-Bangladesh_fig4_229002811#:~:text=Establishment%20of%20fiber%20optic%20links,short%20distance%20fiber%20optic%20links.
3. https://btrc.portal.gov.bd/sites/default/files/files/btrc.portal.gov.bd/annual_reports/851d78f5_c1c2_411a_a30d_341cef7775d9/2022-02-09-05-29-11613ef8220844934a991009b770acea.pdf
4. https://bcs.org.bd/en/blog/evolution-of-the-internet-in-bangladesh
5. https://www.slideshare.net/slideshow/history-and-evolution-of-bangladesh-internet/54698845
6. https://bcc.portal.gov.bd/sites/default/files/files/bcc.portal.gov.bd/publications/3f9cd471_9905_4122_96ee_ced02b7598a9/2020-05-24-15-54-43f3d2b8b4523b5b62157b069302c4db.pdf\
7. https://www.btrc.gov.bd/
8. http://www.ptd.gov.bd/
9. https://www.gsma.com/
10. https://www.internetsociety.org/
11. https://www.grameenphone.com/
12. https://www.fiberathome.net.bd/
13. https://www.worldbank.org/en/country/bangladesh
14. http://www.bix.bd/
15. https://www.worldbank.org/en/country/bangladesh
16. https://www.weforum.org/
17. https://www.telegeography.com/

18. https://www.telecomasia.net/

19. https://www.amberit.com.bd/