

Report On

“Factors Affecting Consumers' Allurement towards OTT
Communication and Impact on Telecom Revenue: An Investigation on
Robi Axiata Limited”

By

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An internship report submitted to the Brac Business School in partial fulfillment of the
requirements for the degree of
Bachelor of Business Administration

Brac Business School
Brac University
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Declaration

It is hereby declared that

1. The internship report submitted is my own original work while completing degree at Brac University.
2. The report does not contain material previously published or written by a third party, except where this is appropriately cited through full and accurate referencing.
3. The report does not contain material which has been accepted, or submitted, for any other degree or diploma at a university or other institution.
4. I have acknowledged all main sources of help.

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16204101

Supervisor's Full Name & Signature:

Mohammad Mujibul Haque
Professor and Associate Dean, Brac Business School
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Letter of Transmittal

Mohammad Mujibul Haque
Professor and Associate Dean,
Brac Business School
Brac University
66, Mohakhali, Dhaka-1212

Subject: Submission of Internship Report

Dear Sir,

With due respect, I am hereby, submitting my internship report titled “Factors Affecting Consumers' Allurement towards OTT Communication and Impact on Telecom Revenue: An Investigation on Robi Axiata Limited”.

During my internship period, I have given my utmost priority in acquiring knowledge for my upcoming professional life along with fulfilling the course requirements under your enthusiastic supervision. I tried my best to varnish the report with essential data and recommended proposition in a substantial and comprehensive ways as possible.

I trust that the report will meet the desires.

Sincerely yours,

Mehnaz Kamal

16204101

Brac Business School

Brac University

Date: January 8, 2020

Non-Disclosure Agreement

This agreement is made and entered into by and between Robi Axiata Limited and Mehnaz Kamal, the undersigned student of Brac University; to undertake the internship project described in this report based on the assurance of avoiding the unapproved disclosure of any confidential data of the organization.

.....

Robi Axiata Limited

.....

Mehnaz Kamal

Acknowledgement

To begin with, my heartiest thankfulness to Allah for blessing me with the potentials to engage myself in working with one of the leading multinational telecom companies, Robi Axiata Limited.

However, the accomplishment of this internship project requisite immense supervision along with assistance of numerous people, for which I feel privileged and hence, express my immense gratitude towards them.

It is my pleasure to attain unconditional support, guidance and feedback from my honorable academic advisor Mohammad Mujibul Haque, Professor and Associate Dean of Brac Business School, by which I was able to accomplish this project within the given time schedule.

In addition, through occupying myself with one of the most dynamic teams named Contract and Partner Management; Finance Division of Robi Axiata Limited, I feel truly privileged of unleashing my potentials. Moreover, without the direction, assistance and coordination of my respected team members, this project would not have been fruitful. Hence, I would like to prompt my thankfulness to my line manager Mohammad Hafizur Rahman, and my supervisors Sabbir Ahmed, Ashiqur Rahman, Khondakar Nasir Uddin Mahmud and Ahmed Istiaq Hossain for guiding and motivating me throughout my whole internship period.

Last but not the least; I owe my utmost gratitude towards the employees, interns, or anyone who have assisted me by providing any sort of information along with suggestions regarding my internship project.

Executive Summary

With the uninterruptedly changing worldwide business trend, Bangladesh telecommunication industry is going through the turmoil by OTT service providers, who are relentlessly threatening telecom business by taking revenue out of local operators' pocket. The report focuses on establishing the case based on the continuous impact of OTT over the revenue of Robi Axiata Limited, the second largest telecom operator of Bangladesh. Throughout this report, it has been figured out that cost advantage, unique features, messaging preferences, smartphone and internet penetration are some of the dynamics responsible for consumers' allurements towards OTT communications. Nonetheless, with the enduring shift in consumer behavior from voice call towards data based services; voice revenue and average revenue per user is slowing down, but the growth in data revenue is tremendous. In order to be the next generation telecom operator, Robi should notably shift emphasis from core telecom business to digital solutions, facilitating consumers' digital lifestyles.

Keywords: Robi Axiata Limited; OTT; Telecom; Messaging preferences; Voice revenue; Digital solutions.

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List of Acronyms

BTRC	Bangladesh Telecommunication Regulatory Commission
KPI	Key Performance Indicator
SCL	Summit Communications Ltd.
FHL	Fiber @ Home Ltd.
OTT	Over the top
BTCL	Bangladesh Telecommunications Company Limited
MNP	Mobile Number Portability
MNO	Mobile Network Operator
MFS	Mobile Financial Services
VAS	Value Added Services
GSMA	Global System for Mobile Communications Association
BL	Banglalink
GP	GrameenPhone
DS	Digital Service
IoT	Internet of Things
ARPU	Average Revenue Per User

Chapter 1

Overview of Internship

1.1 Basic Facts

Student Name: Mehnaz Kamal

Student ID: 16204101

Program & specialization: Bachelor of Business Administration in Finance & Marketing

Email: sneha.mehnaz@gmail.com

Internship Period: 01-09-2019 until 31-12-2019 (4 months)

Internship Company Name: Robi Axiata Limited

Department/Division: Contract & Partner Management, Finance Division

Internship Company Supervisor's Name: Mohammad Hafizur Rahman

Position of Supervisor: Vice President, Contract & Partner Management, Finance Division

1.2 Internship Objectives

Internship is considered as an organized work experience, which is interrelated to a students' academic, professional, and individual augmentation with the guidance under a mentor or supervisor in the workplace. In order to give an undergraduate or graduate level student the taste of real work life experiences due to having transition into full time work environment from academic environment, internships are being conducted. Some of the main objectives of internship for an individual includes exacerbating interpersonal proficiencies, experiencing work life professionalism, identifying career opportunities, building up networking and references which eventually prepares an intern for the upcoming career path obstacles.

1.3 Job Scope

Since, it is mandatory to complete internship program to complete the Bachelor's degree, I grabbed the opportunity to work under Robi Axiata Limited for four months internship program, which eventually provided me some job scopes or responsibilities. I was assigned in Contract & Partner Management (CPM) department under Finance division, which focus on partner governance and contract management. Some of the main scope of CPM includes: support management decision making through financial analysis, partner invoice checking along with validation, cost savings and avoidance, contract review and improvement, partner risk management, dispute resolution with partners through negotiation etc. While working as an Intern in CPM department, some of the job responsibilities were as the followings:

- *Validation of invoice items:* After receiving the invoice from vendor in each month, I was assigned to validate those invoice items through invoice check test to ensure the item wise financial cost impact of the sites of that particular month in excel.
- *KPI incentive analysis:* Based on the invoice of each month, I had to analyze site wise KPI incentive analysis to figure out the percentage of KPI along with amount of incentives that has been achieved monthly.
- *Maintaining opex tracker:* I had to keep track of the opex of invoice items for the year 2019. Opex tracker is basically a tracker which helps in identifying month wise operating expenses for the year along with an overview of the summary of invoice items, percentage of change in opex from which it is easy to understand in what amount the opex has been increased or decreased compared to the previous month.
- *Financial cost trend analysis:* Conducting various financial cost trend analysis was one of my important job responsibilities. Some of them includes rental threshold analysis which indicates how many additional cost are passed to Robi, shared site (the sites of Robi that they share with GP, BL) monthly cost trend analysis, invoice item wise financial impact

for relocation of old sites for the year, figuring out whether there was any duplicate sites claim in the invoice and incremental cost for those sites for the year.

- *Preparing newsletter for CPM:* I was assigned to prepare a draft newsletter for CPM team which includes partner wise achievement, cost efficiency amount, number of invoice validation, overall cost savings with cost avoidance, number of contracts being improved, amount worth invoice KPI validation etc. based on 3rd quarter.
- *Internal team reporting:* Preparing monthly internal team reporting was another responsibility of mine which was mainly assembling a power point report based on the contribution and achievement of individual team members.
- *Other activities:* Some of the other job scopes were preparing job description for the new resource requisition, conducting a knowledge sharing session for CPM team, meeting minutes (mom) preparing, assisting my line manager in preparing a draft presentation on an article named “Pwc next gen workforce” etc.

1.4 Contribution to Robi

During my four months internship period, I have tried to give my level best in assisting my team, as well as, contributing to Robi. Through my little part of work, I have tried to figure out some insights regarding the invoices through validation. First of all, I figured out that there was duplicity in sites and the vendor was claiming additional rental threshold for that duplicate sites, which eventually increased cost for Robi. However, I successfully mitigated increased financial cost by identifying the duplicity in sites. Other than that, I was able to complete task within deadlines, which helped my team to ensure efficiency in their overall work. Last but not the least, I have taken a knowledge sharing session for my team regarding improving corporate work culture and motivating employees (especially millennial). Based on this insights and feedback, Robi will be able to improve their work environment, as well as, motivate young talents which will eventually generate increased productivity.

1.5 Benefits of Own Self

Work based knowledge: Through my internship period, I have generated a lot of work based knowledge regarding financial invoice validation, financial cost trend analysis, team reporting preparing, meeting minutes preparing etc. which were new learning opportunities to me.

Corporate culture: Robi focus mostly in equality, which is the reason of their corporate culture being so motivating. Through this time span, I learned workplace behavior, professionalism, office culture, code of conduct of Robi which will eventually help me cooperating myself in my future professional corporate life.

Improvisation of personal development: As it was my first experience working in a multinational corporate workplace as a full time intern, it enabled me to improvise my interpersonal skills like communication, leadership ability, agility, team work, problem solving ability etc. along with efficiency in soft skills like Microsoft excel, power point, SAP etc.

Understanding on Telecom industry: I have gathered an overall understandings on the telecom industry along with its functions such as; tower, site sharing, anchor sites, new sites, partners or vendors involvement, contracts etc. which gave me broad idea about telecom operators.

Professional networking: In the corporate world, networking is very important for own growth, and hence, I was successful enough in making strong networking with the professionals by communicating and learning from them which I believe will assist me in my future work life.

1.6 Problems and Difficulties faced at Robi

Less span of time: Since internship period is mainly based on three to four months, it was quite challenging for me to handle everything at this little span of time. Hence, it was not possible to learn everything within this little four months' time period along with balancing between internship work and preparing academic report write up.

Confidentiality: Due to confidentiality, availability of information was not adequate. It was challenging for me to come up with a topic for internship report which will not violate the confidentiality terms of Robi.

Understanding organogram: After joining as an intern, it is tough to understand the overall organizational organogram. Though there was an orientation program describing the organogram, code of conduct, responsibilities of intern but it was challenging to understand which department does what under each division, which was one of the main difficulties.

1.7 Recommendations and Suggestions

Being one of the leading telecommunication company of Bangladesh, Robi Axiata Limited should focus on overcoming challenges interns face so that they feel motivated enough.

Higher incentives for interns: Despite being a reputed MNC, the compensation package for interns are not as satisfying compared to other competitors. By getting a higher incentives through salary or through compensation for food or transportation, interns would be more motivated and encouraged, which is one of the suggestions that Robi should look after.

Providing challenging work: According to me, though internship period is very less, providing challenging work to interns will motivate them more to fulfill their deadlines in an enthusiastic way and they will feel that they have contributed to the company with higher productivity.

Proper introductory session: After joining with the team, there was no proper introductory session regarding departmental work, responsibilities of each individual of that department etc. which is important to know for understanding the overall departmental work and for giving valuable feedback to them to improvise. Since an intern stays for a very less period of time, a proper departmental introductory session will help them doing works very efficiently.

Chapter 2

Organization Part

2.1 Introduction

Objective: The focal objective of the organization part is to provide an overall assessment of the organization, Robi Axiata Limited along with evaluating its functional areas, as well as, providing a strategic analysis or audit.

Methodology: The organization part is going to be an evaluation research, in order to figure out company's performance analysis. Hence, both qualitative and quantitative methods will be needed through utilization of primary data and secondary data.

- i. Primary data sources: interviewing employees, interns to find out organizational policies, human resource practices etc.
- ii. Secondary data sources: Robi website, Robi sustainability reports, annual report of Axiata Group, various articles published in newspapers etc.

Scope: In order to conduct an overall assessment I will try to focus on management practices of Robi including the organogram, divisions, human resource practices, ethical code of conduct etc. Next, the marketing issues such as; marketing mix, corporate social responsibilities and financial performance analysis will be evaluated and hence, last 4 years (2015-2018) data from Axiata annual report will be used. Last but not the least, to understand overall external and internal organizational issues, industry and competitive attractiveness, SWOT analysis of Robi will be audited along with providing some recommendations.

Limitations: Robi Axiata Limited do not publish any distinct annual report; hence, from their parent companies' (Axiata Group) annual report, the financial information of Robi will be collected. Because of the limited information regarding marketing, management, operational and financial issues, some insights will be difficult to evaluate. Other than that, due to confidentiality, it is not possible to publish all the information to outsiders through internship report, as it violates the confidentiality norm, which is one of the limitations for this strategic analysis or audit.

Significance: From this organizational part, the overall organizational situation of Robi Axiata Limited can be evaluated, through which finding out strengths, weaknesses, opportunities and threats will be much easier. However, through this part, I will be able to assist Robi in providing a strategic audit or evaluation on their overall performance, by giving some recommendations and suggestions to ensure successful transformation as a digital company.

2.2 Overview of the Company

2.2.1 Robi Axiata Limited

The telecommunication industry, being one of the most dynamic industries in Bangladesh, is evolving with an impressive growth through its vision named 'Digital Bangladesh'. One of the most successful companies that is focusing solely on chaotic process of digital innovation with fiscal discipline is the country's second largest mobile network operator, Robi Axiata Limited having 48.35Mn subscribers (BTRC; Oct 2019).



Figure 1: Journey of Robi Axiata Limited

Robi Axiata Limited (Robi) is a subsidiary company of Axiata Group Berhad, Asian telecom giant in Malaysia including other shareholders Bharti Airtel and NTT DOCOMO Inc. Since 1997, with the brand name *Aktel* the journey commenced as Telekom Malaysia International (Bangladesh); followed by through rebranding in 2010 the journey continued to grow as *Robi Axiata Limited*. After the merger with Airtel Bangladesh on November 2016, the merged entity started its commercial operation as *Robi Axiata Limited (Robi)* which was not only the biggest merger of Bangladesh, but also the first ever merger in the telecom industry of the country.

Throughout the competitive journey, Robi was the first pioneer to introduce GPRS and 3.5G services in 2013 and the first company to launch and create the largest 4.5G network in all the 64 districts in the country at the same time in 2018. However, it is the single mobile operator to have successfully led the trial run of 5G and Voice over LTE (VoLTE) technology on its 4.5G network. Robi has cemented its position as the leading Digital Service Provider with unprecedented network expansion in the history of telecom by on-airing 7,400 4.5G sites and adding 4,600 3.5G sites by the end of 2018.

Among many awards, Robi was awarded with '*The Swiss Embassy Award*' for social impact, '*APICTA Award*' on best ICT Venture in Asia Pacific region, '*Emerging Market Service Provider of the Year Award*' at the 10th Frost and Sullivan Asia Pacific ICT Awards etc. Robi has also been leading in the new frontier of digital solutions by embracing innovation with successful transformation as a digital company. All these tremendous developments in digital services were the reason of attraction for the customers and hence, they joined Robi as soon as the MNP facility introduced in October 2018.

Robi focus on its core value, as well as, guiding principle of being agile, digital, innovate and collaborate with commitment of exceptional performance and uncompromising integrity (UI-EP) to ensure creation of value, putting the customer at the center. (Values and Principles: Robi Axiata Limited, 2019) Through the merger with Airtel, the company's appeal to the rebellious youth of the country widens and hence, Robi feels confident in transforming as a digital company to change the lives of millions of its people through relishing the journey that lays ahead.

(Source: Company Profile, 2019; Robi Sustainability Report, 2018)

2.3 Management Issues

2.3.1 Overview of Organizational Structure of Robi

The organogram of Robi Axiata Limited starts with the Managing Director and Chief Executive Officer Mr. Mahtab Uddin Ahmed; the first homegrown CEO of Robi since 2016, who is accountable for renovating Robi into a next-generation digital company. Other than CEO, the organizational structure includes CXO's (the divisional heads) who are responsible for managing the whole divisions and Executive Vice President, Vice President are responsible for managing the individual department under that division. General Managers generally helps in coordinating between employees and department heads, whereas Managers, Specialists and Executives perform various tasks given by their immediate top level management.



Figure 2: Organogram of Robi Axiata Limited

2.3.2 Management Committee: Divisions of Robi

The management committee of Robi comprises of the CEO, Mahtab Uddin Ahmed along with CXO's (divisional heads) for conducting the management practices perfectly. Currently Robi has 9 divisions which are separated into various departments with establishment in different regions of Bangladesh. The divisions of Robi along with its management committee are:

1. Finance Division: Chief Financial Officer
2. Market Operation Division: Chief Commercial Officer
3. Technology Division: Chief Technology Officer
4. Digital Service Division: Chief Digital Services Officer
5. Corporate Strategy Division: Chief Strategy Officer
6. Corporate and Regulatory Affairs Division: Chief Corporate and Regulatory Officer
7. Human Resource Division: Chief Human Resources Officer
8. Enterprise Business Division: Chief Enterprise Business Officer
9. Information Technology Division: Chief Information Officer

2.3.3 Human Resource Management Practices

Human Resource Management in Robi is so strong that they have been awarded various categories such as; 5th Best Employer of the Year, 2014 at 22nd World HRD Congress, Talent Management award, Best HR strategy in line with Business award and Global HR Strategy award, which reinforces HR's belief of heading towards the right direction.

Hiring Policy: Robi Axiata Limited's hiring practices mainly starts with resource requisition by a specific department. Afterwards, HR committee place job advertisements through LinkedIn and other job posting sources by mentioning the responsibilities. The next process includes screening of CV and selecting the suitable candidates for written exam, followed by taking interview of the selected candidates. The last process is held by departmental heads

through interviewing selected candidates and hence, through on boarding sessions. Most of the time Robi focus on external recruitment policy for entry level, midlevel and top level recruitment, but some internal recruitment also take place which are likewise the selection process of external recruiting. At Robi, in order to attract the best talent and foster them in retaining for an extended period, management trainee post are being offered under the name of “Graduate Trainee Program” by conducting an exciting journey to demonstrate candidates’ ability through rigorous online and offline assessment tests.

Training and Development: In order to bring the efficiency level of employees, Robi focus on training and development of their employees with the concept of MAD (Modern, Agile and Digital). Robi focus on not only on the job training and off the job training like Data analytics tool training, Artificial Intelligence training, Oracle, SAP training; but also online training like LinkedIn learning through which employees can develop their interpersonal skills in a digitized way. Through MAD agenda, Robi is expecting to create a benchmark in the telecommunication industry through digitization.

Motivational Factors:

Promotion: Human Resource Management of Robi always try to motivate employees in such a way so that they feel strong belongingness with Robi. Most of the time, employees are encouraged by giving promotions based on their performance along with based on the vacancies available in the upper level. Other than that, employees are given promotion through job rotation to another department or division so that they become inquisitive in grabbing new opportunities of learning by working in diversified departments.

Reward: The productive, agile and motivated employees are given rewards or recognition based on their performance. Most of the employees are assigned with individual job to achieve their own KPI along with organizations’ overall KPI. Hence, Robi organizes a periodic

appraisal for their employees based on their performance and give reward to those employees who contributed the most by giving rewards such as: Quarter wise best performer, Best performer of the year in the particular divisions and departments.

Other Fun Activities: For motivating employees, Human Resource Management of Robi organizes various fun activities like Futsal or foosball tournament on a quarterly basis, Mad Hour (one hour break from work and engaging employees in fun activities), Fun Day (a specific day in each quarter when employees are allowed to bring their children so that they can have fun with their parents in the workplace environment and culture).

2.3.3 Corporate Governance: Ethical Work Culture Practices

Robi Axiata Limited follows the highest standards of corporate governance whilst recognizes its importance by participating an active role in the governance. Recently, Robi Ethics Week 2019 has been conducted to aware employees on code of conduct. Robi Ethics Office handles all types of ethical investigation regarding any complaints, defalcations, reports and actions. Robi ensures that every employee should follows code of conduct, whistle-blowing policy and gift guidance policy with cooperative effort within the company.

2.4 Marketing Issues

2.4.1 Marketing Mix of Robi Axiata Limited

Product & Services:

Prepaid and Postpaid Packages: Goti 36, Noor Pack, Shorol 39, Prepaid New Connection, Robi ACE are the products they provide with cheapest call rate, widest 4.5 coverage, voice, bundle and entertaining offer.

Digital Services: Being the groundbreaker in the telecom industry Robi is heading towards changes with unique digital solutions:

- *Islamic lifestyle app, Noor:* The first comprehensive digital assistant, Noor, is aimed at the virtuous Muslim subscribers of Robi who emphasize on living a religious lifestyle in this modern era. Some of its features includes narration of the holy Qur'an with Bengali translation, Digital Tasbih, 99 names of Allah with meaning etc.
- *E-commerce marketplace, Robi Shop:* To create a convenient, handy purchase through the premium e-commerce marketplace for online digital gadgets, Robi Shop has been launched, which offers the most flexible payment options via online/MFS/cash.



Figure 3: Digital Services Offered by Robi

- *Digital health service, My Health:* To ensure quality health care services for the Robi subscribers, My Health has launched, which includes features such as; doctor appointment, health questions, finding out nearest hospitals, ambulance, pharmacy etc.
- *Digital ticketing hub, BD tickets:* For ensuring customers' premium online booking portal for numerous local transportation services including bus, launch services along with entertainment events and movies across the country BD tickets has been launched.
- *Vehicle tracker solution, Robi Tracker:* Along with the help of GPS technology, Robi tracker sends subscriber the details on their vehicle location on Google maps, which can be tracked through the web portal of Robi Tracker and mobile app.
- *Payment transactions platform, Robi Cash:* Robi Cash enables to accomplish a wide range of payment transactions using mobile phone anytime across the country such as; utility bill payment, train ticketing, Robi airtime purchase etc.
- *Digital travel solution, Ghurbo.com:* Ghurbo is an online travel agency created to reduce time, effort of booking travel plans with a mobile app, so that travelers can find nearby tourist spots with great deals based on their current location. In addition, through travel insurance coverage, the agency safeguards safe traveling.
- *Largest app store, BDapps:* BDapps is considered as the largest app store in Bangladesh, through which subscribers along with young app developers can create not only numerous unique applications, but also can access to localized mobile apps easily.

Value Added Services: In order to increase revenue stream and to satisfy customers, Robi offer VAS, including: Entertainment, Social and Chat, Islamic Services, Calling and mobile management, Music, Information Services, Multimedia, Loyalty Program, Health, Robi News Services, Finance and Career etc.

Pricing: Robi has to follow uniform minimum call rate given by BTRC from August 2018, which is 0.45p/min for both off-net call rate (same operators' network) and on-net call rate (different operators' network). Nonetheless, there is variety of pricing in terms of internet package such as volume pack, social pack, freedom pack(1GB @BDT23), monthly data pack(1.5GB, 30days 209BDT), combo pack etc. for which Robi focus on competition based pricing. For voice call package through prepaid or postpaid, Robi provide many call rate offers like 50p/min call rate, 1p/sec rate cutter offer etc. Some of the pricings on call rate offers to any local number, internet packs compared to its biggest competitor GP is given below:

<i>Operator</i>	<i>Call Rate</i>	<i>Recharge Target</i>	<i>Validity</i>
<i>Robi</i>	50p/min	BDT 21/49/106	2/7/30 days
<i>GP</i>	48p/min	BDT 48	2 days
<i>Robi</i>	1p/sec	BDT 21/28/39/49/79/109/166	2/3/5/7/15/30/45 days
<i>GP</i>	1p/sec	BDT 21/29/39/49/79/109/209	2/3/5/7/10/30/60 days
<i>Robi</i>	3GB	BDT 61	3 days
<i>GP</i>	3GB	BDT 67	3 days

Table 1: Some of the Pricings of Robi Compared to Competitor GP

Place: Along with 3G and 4G network connectivity all over Bangladesh, Robi has launched 4.5G network coverage in all the 64 districts of Bangladesh with 7,400 sites since 2018, to spread their network coverage with unique product and service offerings across the country. However, Robi has Head Office in Dhaka along with its customer care service, *Sheba Locator* in almost all the districts in Bangladesh through which customers can solve any problem regarding their MNO, switch to MNP services, new connection offer, roaming service etc.

Promotion: In order to attract large consumer segment, Robi conducts various promotional activities to uphold their brand. Some of the promotional mix includes:

Advertising: Through different social media platform like Facebook, YouTube and Instagram Robi promotes digital advertising regarding their offers, services, campaigns etc. Additionally, through TV commercials, billboards, banners, print media, radio they promotes their products and services towards target consumers.

Sales Promotion: In order to boost sales revenue, various offers are promoted by Robi to generate larger customer attraction towards Robi. For example,

- *Silent Sim Offer:* Various silent sim offer are provided by Robi in order to retain customers back to 4.5G network by promoting offers like *2GB and 30 minutes@54 taka* recharge.
- *Eid Mega Sale:* Robishop provides discount offers on particular devices and gadgets. One of the sales promotion was up to 63% discount through purchase during Eid, along with three months EMI facility. Moreover, within that offer, through bKash payment, up to 300 taka additional discount could have achieved.
- *Robi Dhonnobad Program:* It is a reward program, which lets Robi Dhonnobad customers earn rewards, bonus, offers of their own choice from trendy brands, sports, movies artists etc. Some of the special discount offer from Dhonnobad program was availing 10% discount from Wellbeing Pharmacy's medical along with non-medical products, special offer from purchasing bus, train, and launch tickets through BDtickets.
- *Device Offer:* Robi offers various handset device offer through Robishop, by which customers can enjoy bundle offer along with purchasing new Xiaomi, Huwaei, Samsung or other devices only with Robi-Airtel subscription.

Direct Marketing: Through attractive websites, phone calls, SMS marketing towards customers Robi promotes various offers and packages of their products and services.

Public Relation: In order to promote the brand along with retaining customers Robi arranges various events, campaigns, contests, through media coverage. Some of them includes:

- *#CommonSense:* Robi arranged a social awareness program named #commonsense, to increase alertness towards digital lifestyle issues such as; before sharing something in social media checking its authenticity, observance on mobile phone usage of one's own kids, consequence on mobile phone usage while crossing the road and driving etc.
- *Datathon:* Robi arranged country's first datathon competition, where winners got prizes up to 8lacs taka. This competition was arranged to make sure the rising community of data specialists can contribute in propagating unique business resolutions.
- *Campaign Pahela Boishakh:* The main intention of this campaign was to exhibit the Pahela Boishakh celebration through posting pictures on Instagram with 'Hello World, #meetBoishakh #travelgram #Pohela_Boishakh' tag on the day with number one trend.

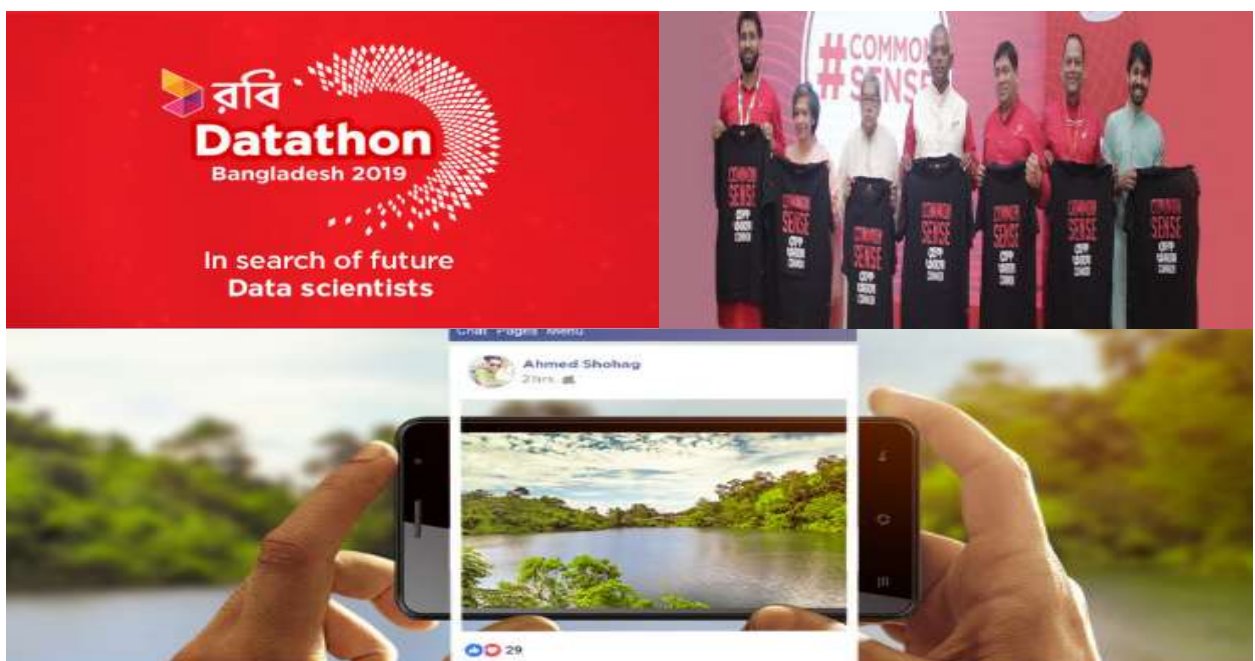


Figure 4: Promotional Activities of Robi

- *Discover Bangladesh:* A photography contest was held where Robi users participated by uploading a photo of Bangladesh by their own by posting on Facebook with the *#Robi #DiscoverBangladesh* tagline.

Process: The process of registration through NID into Robi mobile number operator, switching to MNP, activation of prepaid or postpaid connections, purchasing data or voice package, giving utility bill through Robi cash, using digital solution apps and VAS seems to be relaxed and convenient for subscribers.

Physical Evidence: The eye-catching informative website, digital solutions applications, sales person in customer center, logo, packaging of products are the physical evidence which help consumer to have positive judgment about Robi.

2.4.2 Corporate Social Responsibilities of Robi

- ***Robi-10 Minute School:*** Pioneering in the domain of m-Education by creating Robi-10 Minute School, the largest online school is providing quality educational content for students across the country on Facebook, YouTube and through Apps to almost 32 thousand students in free of cost (Robi Sustainability Report, 2018). Among various awards, some of the noteworthy awards for Robi-10 Minutes School includes: ‘*Social Innovative Award 2019*’ by BIC (Bangladesh Innovative Conclave), ‘*5th Digital Marketing Summit Award*’ by Bangladesh Brand Forum, ‘*GSMA Glomo Award 2017*’ for best mobile innovation for educational learning by (MWC) Mobile World Congress etc.
- ***R-ventures:*** In order to promote and inspire the growth of digital start-ups in the country Robi has launched a program named, r-ventures which allowed everyone in the country with a sustainable digital business idea by securing a funding of 84 lakhs taka from Robi.

- **Internet 4u:** By collaborating with British Council, Robi created awareness on the safe and inappropriate use of internet among youth along with allowing parents to shield their kids from harmful content on the internet through smart filtering technology.
- **Mission Kombol:** A social responsibility initiative named Mission Kombol made easy access for general people to donate money for purchasing blankets for cold affected people through the digital platform of Robi.
- **Safe Drinking Water:** In association with WaterAid and Bangladesh Railway, Robi decided to provide pure drinking water in the major railway stations for railway passengers with the slogan '*Nirapod Pani, Shustho Jibon*'
- **Robir Alo:** Under the slogan of '*Let the Light Ignite a Brighter Future*' Robi undertook a project named *Robir Alo* for underprivileged people living in Kurigram district and Chittagong Hill Tracts. The aim of the project was building mini-solar power grid along with maintenance of the solar panels to provide electricity, power support (two lights with one charger) and home solutions among the villagers until 2018. Through this social economic development activity, almost 950 families with around 4000 people were benefitted.
- **333 with a2i:** Robi and Genex Infosys Ltd are providing technical assistance on availing government services information in all districts by the Access to Information (a2i) Program, which serves as the National Information Centre for Bangladeshi inhabitants by dialing 333.
- **Robi Internet Corner:** Collaborating with Department of Public Library, Robi initiates Internet Corners at the divisional libraries in Dhaka, Chittagong, Khulna, Rajshahi, Sylhet, Barisal and Rangpur, which provide free access to internet for creating a knowledge based society.

2.5 Finance & Accounting Issues: Ratio Analysis

2.5.1 Profitability Ratios

Profitability ratios demonstrate the capability of a company to generate profit relative to revenue by indicating overall performance of the company (source: Investopedia). Operating profit margin, Net profit margin, ROA, ROE are some of the profitability ratios.

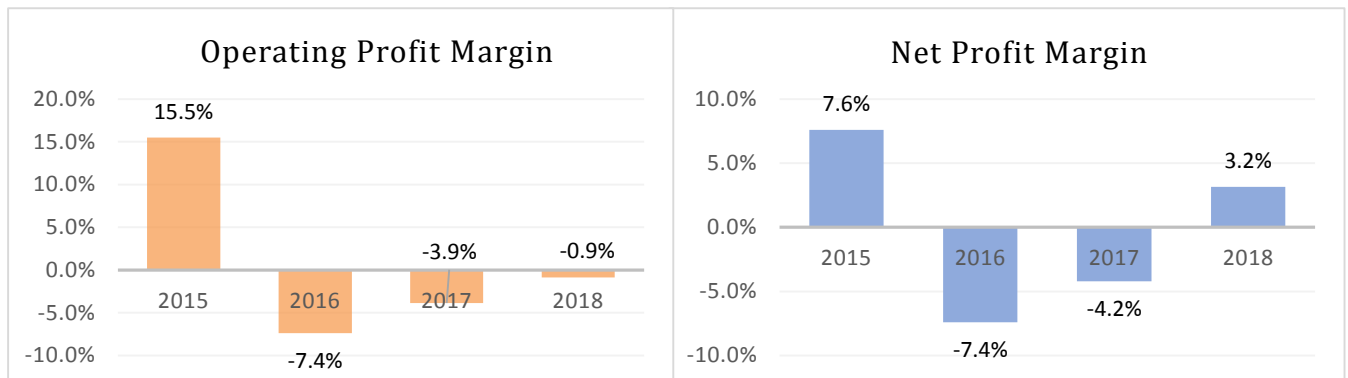


Figure 5: Operating Profit Margin & Net Profit Margin over the Last 4 Years of Robi

Operating profit margin determine the percentage of profit yielding of a company from its operations(EBIT); whilst Net profit margin demonstrate the percentage of profit producing by a company from its total revenue. Based on the EBIT margin trend analysis during 2015-2018, for every 100 taka of sales, Robi generated 15.5 taka of operating profit with a sequential 7.4, 3.9 and 0.9 taka of loss. While in terms of Net profit margin trend for every 100 taka of revenue, Robi earned 7.6 taka of net profit with 7.4, 4.2 taka of loss, then again 3.2 taka of net profit. Therefore, over the last 4 years, it is visible that the operating profit margin of Robi is in a deteriorating negative trend indicating loss, but the trend in loss is improving over the years with an expectation of generating positive EBIT margin in 2019. During 2016 and 2017, due to merger with Airtel, Robi had significant fall in revenue because of increased expenses, consumers switching to other MNO's for poor initial network connectivity after merger; which are the overall reasons for loss in profitability ratios. However, Net profit margin trend was in loss, but Robi has regained towards profit since the last year.

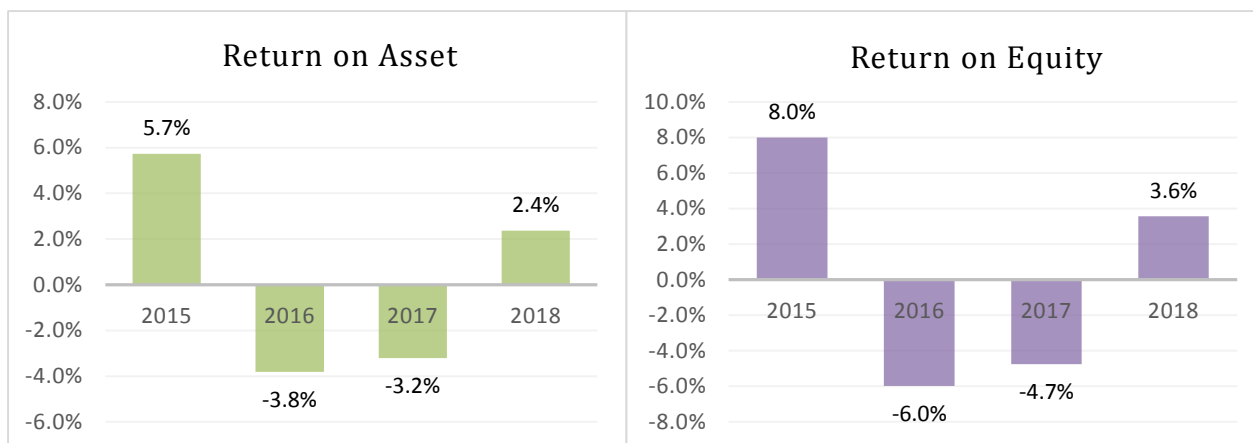


Figure 6: ROA & ROE over the Last 4 Years of Robi

ROA measures profitability of business based on its total asset whereas; ROE measures the profitability or growth based on financing from total equity. Based on 2015-2018 ROA trend, for every taka of assets the company invested, it returned 5.7 taka of net profit, 3.8 and 3.2 taka of net loss then again 2.4 taka of net profit. Whereas, ROE generated 8 taka of profit, 6 and 4.7 taka of loss, later a 3.6 taka of profit for every 100 taka of shareholders' equity. In terms of both ROA and ROE, the trend is quiet similar, indicating the inconsistency in profitability during 2016 and 2017 but from 2018 Robi started to regain profitability. In short, the overall profitability ratio of Robi during the last 4 years was not significant due to inconsistency in profit and loss, hence the performance was not that much satisfactory.

2.5.2 Efficiency Ratios

In order to evaluate how well a company uses its assets and liabilities internally and to measure the capacity of a business in generating sales, the efficiency ratio is used. Among the efficiency ratios, Asset turnover ratio and Equity turnover ratio are two important ones. Asset turnover ratio measure the efficiency of using assets to generate revenue whereas; Equity turnover ratio measures the efficiency of using equity to generate revenue.

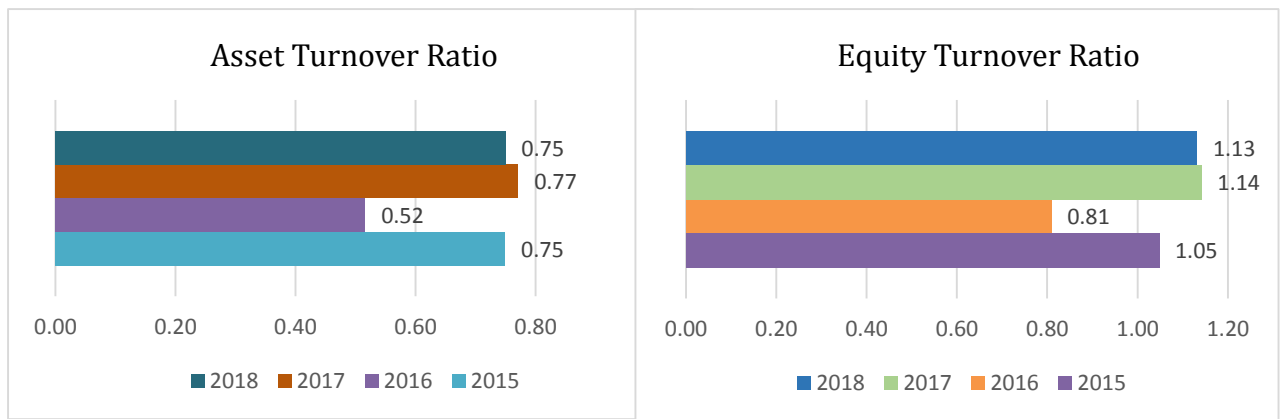


Figure 7: Asset Turnover Ratio & Equity Turnover Ratio over the Last 4 Years of Robi

By analyzing the trend analysis from 2015-2018, for every taka in total assets, Robi generated year wise 0.75, 0.52, 0.77, 0.75 taka in sales based on asset turnover ratio. However, in case of Equity turnover ratio, by using each taka of equity amount, Robi generated 1.05, 0.81, 1.14 and 1.13 taka in sales. Higher asset turnover ratio in 2015, 2017-2018 indicates efficient use of assets to generate sales, lower ratio in 2016 indicates the company did not use assets for generating revenue as efficiently like the other years due to excess cost for merger. While, in equity turnover ratio the scenario is almost same.

To conclude, Efficiency ratios of Robi in generating sales through assets were significant throughout the years except 2016 because of having merger with Airtel.

2.5.3 Leverage Ratios

The leverage ratio identifies the proportion of debts a company possess compared to equity or capital. Debt to asset, Debt to equity are some of the leverage ratios.

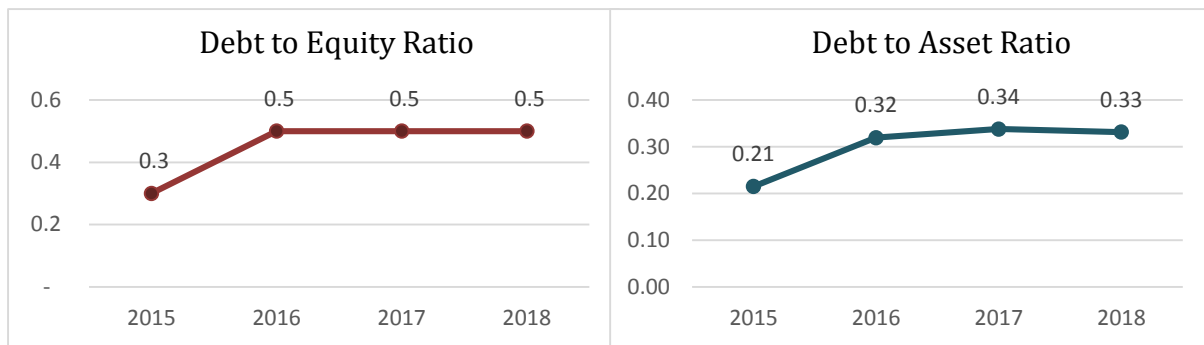


Figure 8: Debt to Equity Ratio & Debt to Asset Ratio over the Last 4 Years of Robi

Debt to equity ratio determines the percentage of a company's total debt against its equity percentage whereas; Debt to asset ratio deals with the amount of total assets that are financed by creditors instead of investors. The trend analysis 2015-2018 of Debt to equity ratio shows increasing consistent percentage of 50% over 2016-2018 that means that Robi used half as many liabilities as equity. While for Debt to asset ratio, almost in all the years the ratio was below one, which indicates Robi has more assets than liabilities.

Overall leverage ratio of Robi shows the consistency and reducing percentage for assets that are financed by creditors, which is a good thing of reducing liabilities, due to financing mostly through the equity portion of the owners.

2.6 Information System Issues

Information system in Robi mainly focus on cyber security, platform planning, devops, networking, firewall, applications etc. and assist Robi in terms of cyber attacking issues, buildup of intranet, extranet, software by which the divisions and departments can smoothly function. Robi prioritize data privacy to safeguard both the data and customer or employee information from unauthorized read, access or any kinds of intrusion acts so that no personally recognizable data are shared with third parties.

2.7 Industry & Competitive Analysis

2.7.1 Competitive Dynamics: Porter's Five Competitive Forces Analysis



Figure 9: Porter's Five Forces Analysis for Robi Axiata Limited

Formulated by Michael E Porter, professor of Harvard Business School, Porter's five forces analysis model helps in measuring degree of competition within the industry along with industry attractiveness and shows ways of positioning a company for achieving success. Hence, to understand the degree of competitiveness within telecom industry and to review the market position of Robi, Porter's five forces assessment has been conducted below:

1. **Rivalry among Competitors:** According to GSMA, the telecom industry in Bangladesh has revolved out as the fifth largest market in Asia Pacific Region; hence, percentage of competition in this industry is huge. Despite being the second largest mobile operator in Bangladesh, Robi has other tough competitors like GP, BL and Teletalk; as a result, rivalry among competitors is high for Robi.
2. **Threat of New Entrants:** To establish a telecom company requires extensive capital with changing rules and regulations from government. Likewise, in Bangladesh, there are large number of restrictions and regulatory issues from BTRC for telecommunication industries, and hence, threat of new entrants will be low to moderate.

3. **Availability of Substitutes:** Considering the alternatives or substitutes to telecom operator, OTT's name come into mind. Since, OTT's are now replacing the voice calling and messaging features of telecom with cost advantage option for consumers, they can be considered as a substitute source for telecom offerings. Hence, availability of substitutes is moderate to high for Robi.
4. **Bargaining Power of Buyers:** The increasing number of subscriber base, 164.17million (4.9% growth rate of subscribers) within one year from (October'18-'19) (source: BTRC), indicates the increasing amount of buyers for telecom industry. Due to having increased number of buyers, buyer power is high, as buyer can easily switch to other operators if they face any problem in terms of benefit, connectivity or cost.
5. **Bargaining Power of Suppliers:** The suppliers of telecom industry are the vendors or partners such as SCL, FHL, Huwaei, Ericsson, E.co, Genex, Digicon, BTCL etc. who are responsible for providing services like telecom infrastructure, tower service, fiber lease line, technology/network etc. Other than the solely supplier named E.co, responsible for infrastructure and tower handling, there are availability of suppliers for other segment, hence Robi can switch to other suppliers. Therefore, bargaining power of suppliers is low to moderate for Robi.

Based on the porter's five forces, it can be concluded that the telecommunication industry is much attractive and the degree of competitiveness with the competitors is high for Robi.

2.7.2 SWOT Analysis of Robi Axiata Limited

Strengths:

- *Second Largest MNO:* One of the biggest strengths of Robi is its increasing subscriber base with 48.35Mn (2019), which is the result of being the second largest mobile network operator company in Bangladesh.
- *First 4.5G Launcher:* Robi is the first leading company unveiling 4.5G service in all the 64 districts with nearly 7,400 sites covering 99 percent thanas of the country, which has not yet been launched by other competitors.
- *Best Network Coverage in Dhaka:* As per Ookla's speed test 2018, Robi constantly showed the best download speed compared to its competitors in Dhaka Division, which is also the strength of Robi.

Weaknesses:

- *Remote Areas' Network Coverage:* One of the vital weaknesses of Robi is its network coverage among remote areas. Though Robi has successfully recognized as the best download speed with high network coverage in Dhaka, but its network coverage outside Dhaka is not up to the mark. Compared to its competitor GP, Robi is lagging behind in terms of fastest mobile network in Bangladesh.

Opportunities:

- *Network Expansion:* Since Robi was the first one to launch 4.5G and trial session on 5G, Robi has opportunities to achieve the first mover advantage again in terms of their network upgrade and expansion towards 5G launching.
- *Investing in DS:* Robi has always been ahead in paving the way for adoption of digital technology hence, investing more on DS and solution through IOT can be one of the

opportunities. For example, recently Robi has partnered with Pathao, to provide digital recharge service through mobile app of Pathao. Hence, it will be a great opportunity for Robi to invest more in DS solutions to be ahead of competitors.

- *Benefit from MNP:* According to (BTRC, September 2019), a total of 6.90 lakh mobile phone users switched their operators without changing their existing 11 digits number through MNP, which can be one of the biggest opportunities to grab the market. If Robi become successful in offering better services and products, consumers will be moving towards Robi through MNP from other operators.

Threats:

- *Competitors' threat:* Since telecom industry is a competitive industry, hence Robi has continuous threats from competitors GP, BL etc. Once competitors will move towards new ways of grabbing the market, it will become a threat for Robi.
- *Rigid government regulations:* However, rigid governmental rules and regulations such as; imposition of vat, tax, uniform minimum on-net and off-net call rate (0.45p/min) for all MNO are one of the threats that Robi might face.

2.8 Summary & Conclusions

Paving towards a digital telecommunication company Robi is focusing not only over its digital innovations, but also towards maintaining a digital culture throughout its organizational structure, management practices, human resource, financial, marketing and ethical work practices. Based on the organizational strategic audit, it can be said that Robi has strong organizational structure along with its various divisions.

Robi strategically follows digital human resource management practices through training and development, implementing MAD agenda; which is one of the strengths of human resource management practices. In terms of marketing issues, the versatile product and digital services are strength of Robi, whilst; due to digital innovation voice revenue compared to data revenue is in downward trend, which can be a weakness here. However, by focusing on strong corporate social responsibilities, Robi is following digitization of socio economic development which is working as a strength factor indicating its' conscious image. By Financial performance analysis, it was figured out that Robi has favorable efficiency ratio and leverage ratio over the last four years, whereas its profitability ratios were unfavorable because of increasing operating expenses, infrastructural investment for merger, 4.5G establishment etc. Lastly, through industry and competitive analysis, the strong competition and challenges in the telecom industry were figured out along with its overall SWOT analysis.

2.9 Recommendations

Some of the recommendations based on organizational audit are given below:

- To achieve digital transformation, Robi should concentrate more towards initiating additional digital cultural practices in their work environment to motivate employees in a digital, agile and innovative way.
- Since, revenue plays a vital role in operations, Robi should find ways to increase falling voice revenue, or offsetting the declining voice revenue trend through data revenue, initiating unique digital solutions more.
- In short, for favorable financial performance, Robi should focus on ways of increasing their profit along with reducing the expenditures as their profitability ratio was not that much satisfactory over the last four years.
- However, understanding the competitive pressures, strategies, management policies, pricings of the products and service of competitors (GP, BL) along with internal environmental analysis is crucial for Robi in order to become the number one telecom brand of Bangladesh with digitization.

To conclude, the telecom industry is very challenging yet demanding, and hence Robi should focus on rejuvenating its' weakness factors into the strength factors to mitigate the challenges.

Chapter 3

Project Part

3.1 Introduction

Background: Telecommunication industry is such an industry, which is uninterruptedly evolving due to countless modernizations in new technologies. However, this modernization might consider as a blessing for telecom industry, at the same time it might be an intimidation as well. Nevertheless, the tremendous development in technologies has augmented consumers' mindset towards data using, facilitating huge data revenue sources for telecoms; whereas in some cases, the headway towards improved technologies has given birth to a worldwide player named OTT (over the top) communication, giving inquietude towards local telecom industry operators. Stating OTT, a medium of real time communication service we use through internet over the network services of our service provider such as; Messenger, Imo, Viber, WhatsApp etc. are known as over the top communication services. In Bangladesh, the establishment of these global OTT by using the operators' upgraded network without any infrastructure is proving to be not only a blessing but also a kind of threat for local telecom operators with a loss in revenue (mostly in the voice sector).

Objective(s):

Broad Objectives: The main objective of this paper is to identify the factors associated with consumers' allurements towards OTT communication due to OTT's better features than telecoms offerings, eventually leveraging consumers. In addition, another objective is to analyze the impact of these underlying factors on telecom operators' revenue, especially revenue generated from voice and data usage.

Specific Objectives:

- Figuring out percentage of OTT using consumers of Robi Axiata Limited through survey results, along with underlying factors responsible for their attraction towards OTT.
- Demographic comparison on the usage of communication channel (OTT vs voice call and SMS of Robi) based on Robi subscribers survey.
- Analyzing voice revenue and data revenue percentage trend based on Robi Axiata Ltd.'s perspective.
- Evaluating ARPU (average revenue per user) with respect to total subscriber base of Robi.
- Figuring out incremental data revenue and dropped voice revenue compared to increased data subscribers/usage of Robi.
- Providing commendations to Robi in handling the challenges faced by OTT towards their revenue.

Significance: This study will help Robi Axiata Ltd. in designing schemes to overcome the OTT threat and in recognizing demographically changing consumers' need, thereby assist in designing alternative offerings to meet up consumers' necessities. Since, aggression from global OTT service providers towards telecom operators' is now becoming an international phenomenon, Bangladesh telecom industry is also not any exception to this. Though this report will be limited with considering only one operator in Bangladesh, but the overall telecom industry will get some leverage and hopefully will be able to figure out alternative solutions to boost up the overall revenue source. Being a developing country, Bangladesh is one of the emerging markets for the OTT communication service providers and hence, it looks like figuring out the impact on this upward data market will be very much attention grabbing.

3.2 Methodology

The report is going to be based on both qualitative and quantitative method, with utilizing primary and secondary data. Due to confidentiality of public data on company-specific OTT usage, the primary data has been used by conducting a survey of a specific sample of population of Robi users, along with identification of the factors associated with their attraction towards OTT.

Other than that, secondary data has been used here for financial performance analysis from Annual Report of Robi Axiata Limited (Subsidiary of Axiata Group Berhad), to understand the consequent impact on overall telecom industry of Bangladesh in light of Robi Axiata Ltd. In addition to it, additional information and insights on these issues has been collected from several secondary sources: Online research papers, BTRC report, Market Intelligence report, Robi sustainability report, Robi website etc.

Due to confidential OTT-user information of Robi, a survey has been done based on a specific sample size of 50 respondents who are *Robi Internet Users*; to find out the reason of their attraction towards OTT. However, respondents got assurance on the confidentiality of their responses along with the purpose of the survey and the survey was based on some set of questionnaire, with respondents' demographic information, which were collected through both hardcopy and online Google forms.

3.3 Analysis and Findings

3.3.1 Over the Top (OTT) Communication

Over The Top, in other words OTT communication is a term refer to deliver of audio, video and further media over an IP network (internet) through a particular provider by sidestepping the traditional operators' network. With the penetration of smartphone with a mobile network operator having GSM calls and SMS services, a customer appoints as a subscriber for that operator. Nonetheless, after having internet penetration with a data plan of 4G or 5G, when the customer use any OTT service like Messenger or WhatsApp to make cheaper voice call/SMS than MNO, cause destruction to mobile network operators as they lose a portion of their revenue due to OTT.

In Bangladesh, the major four OTT players, such as; WhatsApp, Messenger, Imo and Viber are subsequently evolving in the local telecom industry not only as a blessing, but also as a threat. Nevertheless, currently the total number of mobile phone subscribers in Bangladesh is 164.17Mn (Oct'19); increasing from 157.54Mn (Jan'19). Whereas, the number of mobile internet users is 93.79Mn (Oct'19), which has increased from 85.63Mn (Jan'19) [Source: BTRC Report]. Correspondingly, based on a report *Digital 2019, Bangladesh*; published by Hootsuite, the active social media users in Bangladesh have been increased by 13% within (Jan 2018- Jan 2019). Therefore, it is clear that, due to the increased amount of smartphone penetration, mobile phone subscribers along with mobile internet subscribers are increasing to a greater amount, which is the root of adopting over the top communication channels in Bangladesh.

3.3.2 Demographic Analysis:

- Based on the survey of 50 respondents' sample, 60% was male and the other 40% was female.
- Considering the age group of the sample, 54% of the respondents were under the age between 18-28 years, 20% were under the age group of 29-39 years, 18% belonged to 40-50 years; while the remaining 8% were above 50 years.
- Based on the occupation, 50% of the respondents were students; whereas 28% of them were service holders, 12% were housewife and the rest 10% were businessman.

3.3.3 OTT Usage through Robi Internet:

Based on the survey, among the top four OTT communication channel in Bangladesh, the percentage of OTT usage through Robi Internet are: 90% Messenger user, 90% WhatsApp user, 56% Imo user and 50% Viber user; indicating Messenger and WhatsApp as the top ranked OTT preference based on Robi internet users. However, the other ranking includes Imo, followed by Viber; which indicates the subscribers' attraction towards these OTT are comparatively lesser than the top ranked ones.

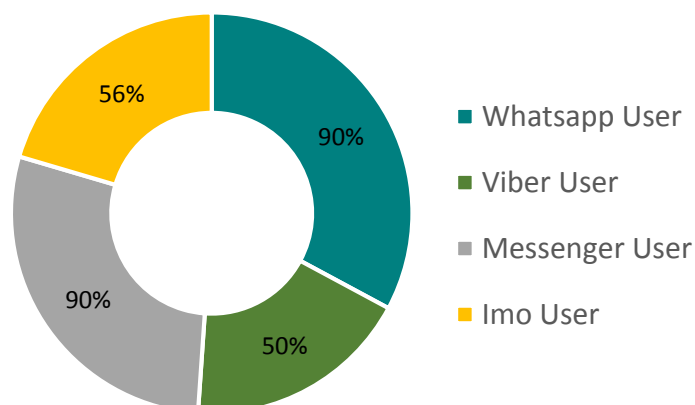


Figure 10: Percentage of OTT Users through Robi Internet

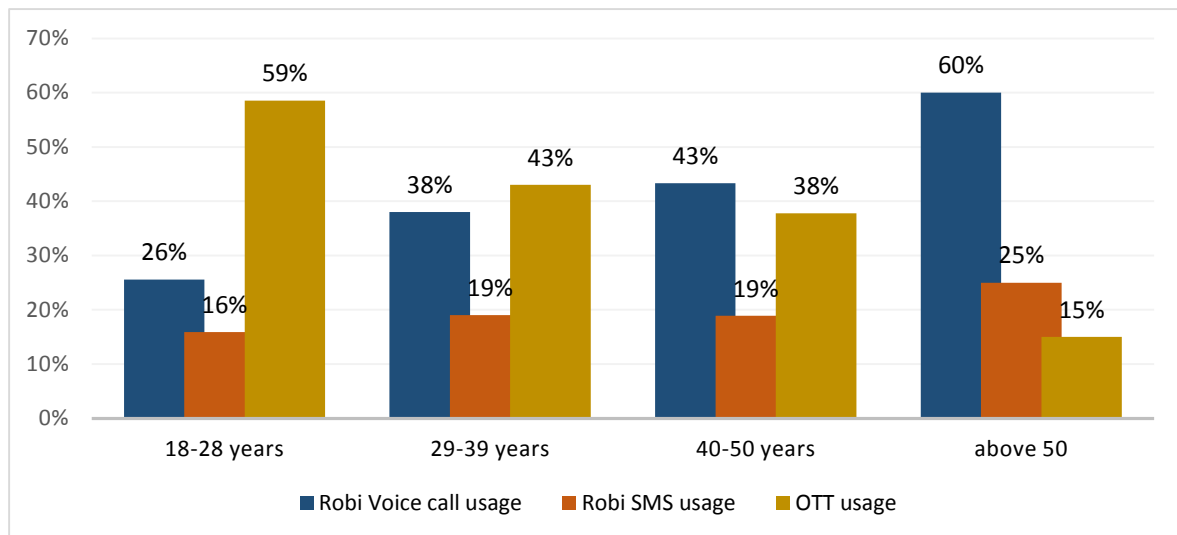


Figure 11: Average Usage on Communication Channels (2019)

According to Robi subscribers' survey, the demographic comparison on the average usage of communication channels based on 2019 shows the age wise preference towards voice call, SMS and OTT usage. During 2019, the Robi subscribers (18-28 years) age group had average 59% OTT usage, whereas 26% of them used voice call and only 16% used SMS through Robi. The subscriber base (29-39 years) age group had an average of 43% usage towards OTT, whilst 38% and 19% of them used voice call and SMS service. Considering the age group of (40-50 years) and above 50 years, the average OTT usage was 38% and 15% only, average voice call usage was 43% and 60%, whereas; SMS usage was 19% and 25% respectively.

From these scenarios, it is clear that average OTT usage during 2019 was prominent towards the age group between 18 to 39 years, whilst the least OTT usage was towards the age group of above 50 years. In short, the young generation, the millennial has the most contribution towards OTT usage, which can be due to their changing mindset towards messaging, their adaption towards new communication medium, advances of technology. However, the voice call usage seems to be the highest towards Generation X, who have yet not adapted themselves with the changing communication channels.

3.3.4 Factors Affecting Consumers' Allurement towards OTT:

▪ **Cost Advantage:**

Messaging: All of the users (100%) from survey perceives that OTT messaging is cost saver than telecom operators' SMS and MMS services because messaging through OTT offer basic messaging services either in free charge (like free messenger option) or in a specific data package fee. However, the amount of mobile data needed for OTT usage is very low compared to users' unlimited messages which makes the cost per message very negligible.

International Calling: Based on 98% users' viewpoint, one of the reasons for their allurements towards OTT is cost saving option for International calling. For conducting any international call, charges are much higher through network operator, but due to advances in higher data bandwidth and service quality international calling (both video call and voice call) through OTT seems to be hassle free with cost advantage through the data package option.

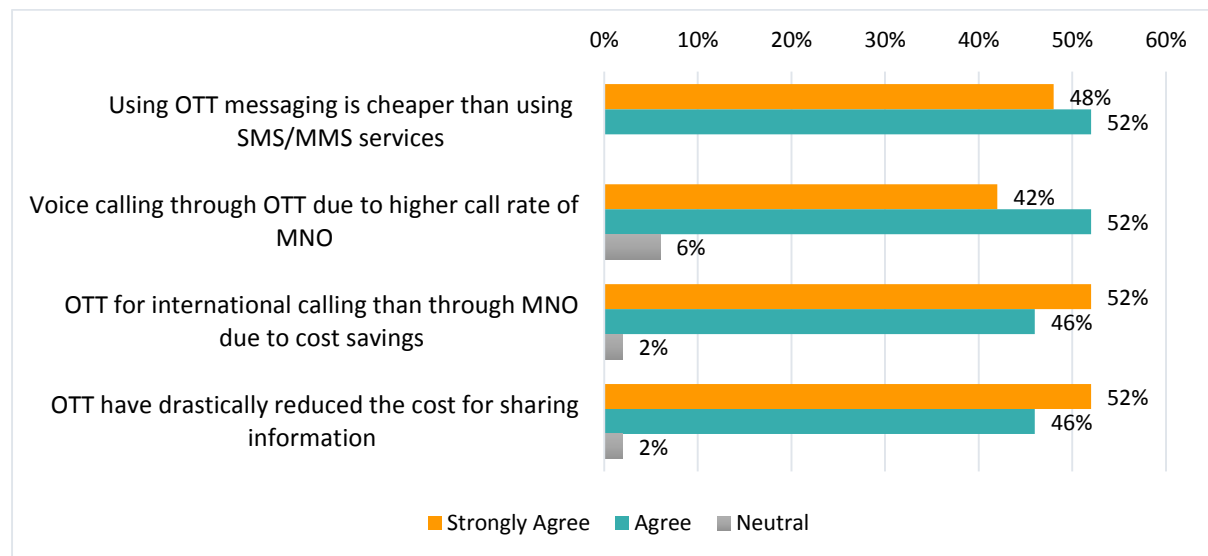


Figure 12: Cost Advantage Due to OTT

Voice Call: 94% users think using OTT will reduce their cost of voice calling. Due to regulations of BTRC, the uniform on-net and off-net call rate of 0.45p/min, the cost has been increased for users because previously on-net call rate (same operators' network) was 0.25p/min, which was lesser. Hence, using OTT will act as a cost saving option for them.

Information Sharing: Modern consumers (98%) senses the necessity of sharing each and every emotion, experience instantly through pictures, videos, files, audios with their closed ones or in any social groups. As, using MMS is very costly for sharing information, users attraction increases towards OTT for drastically reducing the cost of sharing information.

▪ ***Smartphone and Internet Penetration:***

According to 96% survey respondents, due to using smartphone, they tend to enjoy the variety of OTT messaging apps to keep them updated with the latest advancements in mobile apps. However, based on 92% respondents, they have an attraction towards OTT usage just because of their purchasing of internet data pack, which means as they buy internet data pack, they think of using OTT communication channels over MNO's voice call and SMS option. So, the increased mobile smartphone and internet penetration is playing a dominant factor in rapid OTT adoption.

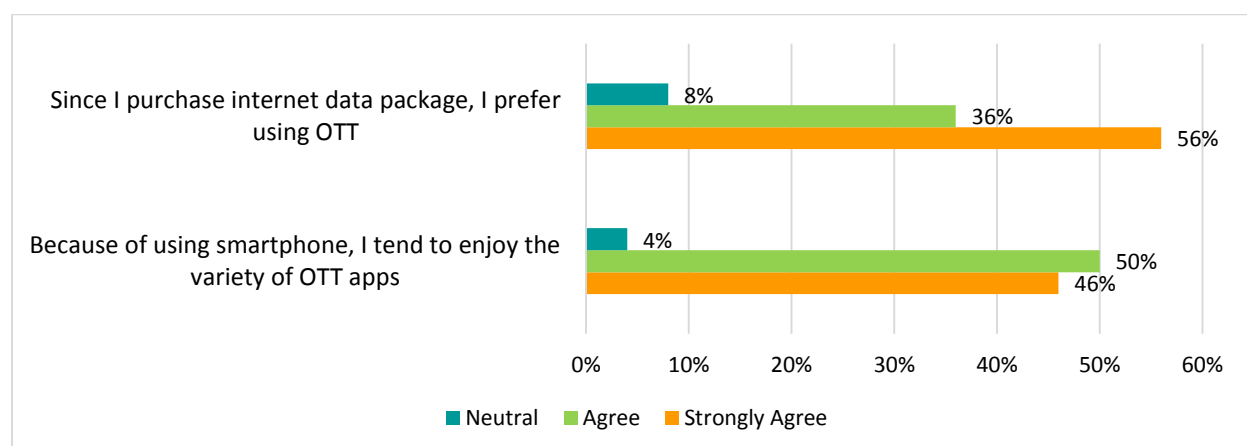


Figure 13: Smartphone and Internet Penetration Leading to OTT Adoption

▪ **Convenience:**

Most of the OTT services offer voice calling facilities using VoIP along with additional features, which makes it very convenient to use. Conferring to the conducted survey, more than 50% respondents agrees to the fact that using OTT seems to be very convenient for them.

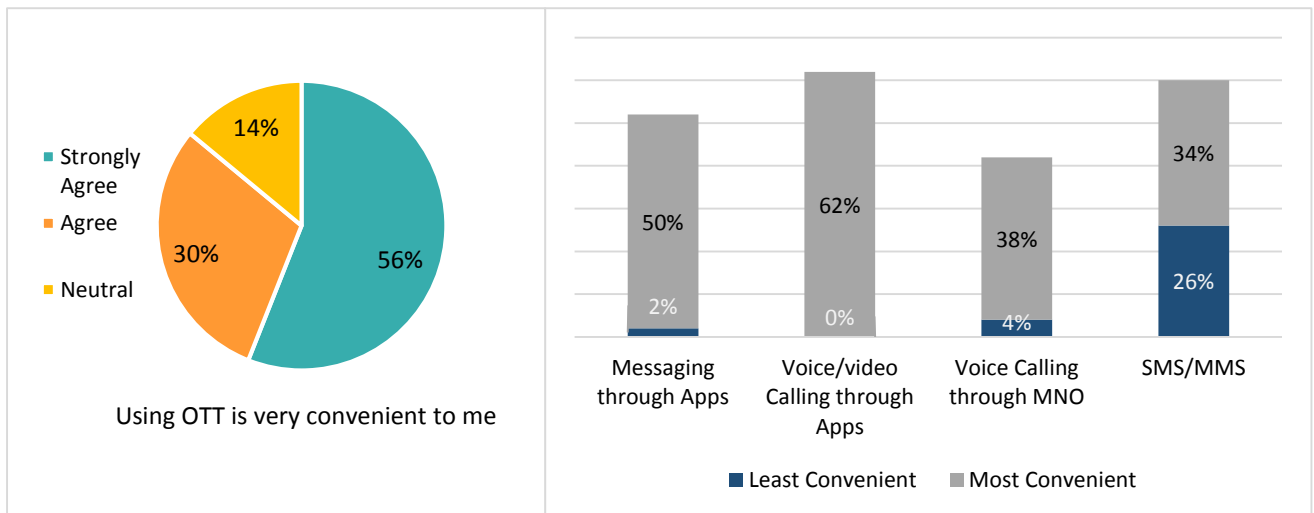


Figure 14: OTT Adoption Due to Convenience Factor

In addition, the most convenient communication channels, which are video or voice calling through apps, messaging through apps, based on 62% and 50% respondents. However, voice calling through mobile operator is preferred by almost 38% respondents while, 34% think that SMS/MMS is the most convenient communication channel. Therefore, from the perspective of respondents, OTT is considered as the most convenient sources for communication (both voice and messaging) and SMS/MMS is now defeating the race by getting the tag of least convenient way of communication source.

The main reason for consumers' convenience is due to the unique features offered by OTT, which leads to better user experience in comparison to telecom operators' services. OTT's premium offering along with its features attract not only teenagers, but also the business magnets.

Level of attraction towards the following features of OTT:

(1 being the least attracted features, 5 being the most attracted features)

Features	1	2	3	4	5
a) Group chat	4%	10%	30%	36%	20%
b) Group call	0%	10%	28%	48%	14%
c) Video call	0%	2%	8%	42%	48%
d) Voice call	0%	2%	8%	26%	64%
e) Character	0%	16%	42%	20%	22%
f) Giphy (GIF)	2%	18%	34%	24%	22%
g) Location sharing	4%	14%	56%	20%	8%
h) Games	18%	20%	28%	20%	14%
i) Multimedia sharing	0%	6%	10%	32%	52%
j) Stickers	2%	6%	32%	28%	32%

Table 2: Consumers' Level of Attraction towards OTT

From the survey, it is clear that the most attractive features of OTT are group chat, group call, video call, voice call, stickers, multimedia sharing such as; photos, file, songs, etc. among the features. However, GIF and character are some features that users neither like nor dislike, and due to advancement in features recently games, location sharing are taking place in users mind as an attractive and useful features. To put it simply, OTT features have succeeded in offering way ahead value to consumers than telecom services ever did.

▪ **Preference of Messaging:**

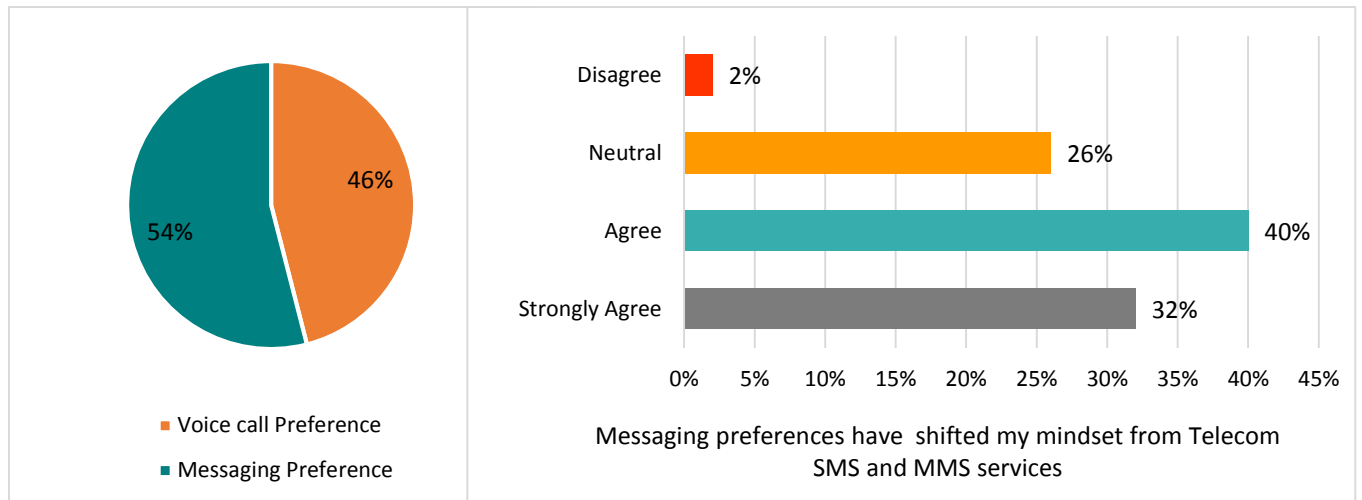


Figure 15: OTT Adoption Due to Messaging Preferences

Consumers' have changing mindset and hence, they are now preferring messaging over voice call to communicate with others (54% users messaging preference, along with 46% users voice call preference). Moreover, users have now shifted their mind from traditional telecom service like SMS/MMS as they believe using those traditional medium will hamper their social posh ness. Other than that, due to introvert attitude and shyness, users are preferring messaging the most through apps. From the survey results, it is prominent that almost 72% users feel that messaging preference have converted them towards OTT, whereas 26% gives a neutral opinion and with 2% gives disagreement to the statement.

3.3.5 Impact on Telecom Revenue:

Due to the allurements of OTT towards consumers, the telecom industry is being affected in positive, as well as, negative ways. However, the impact on dynamic market forces in Bangladesh's telecom industry in light of Robi Axiata Limited, based on quarterly published reports from (2016-2019) of Robi Axiata Limited (Data Financials, 2019) are emphasized in the following section.

▪ **Increasing Subscriber Base:**

Since 2016 until now, the total subscriber base of Robi Axiata Limited has an incremental trend with an average of 5% total subscriber growth. After the merger between Robi and Airtel during 2016, the total subscriber base is consistently increasing and reached 47.94Mn based on Q2, 2019. However, in line with increased total subscriber base, data subscriber base is also in upward trend (30.11Mn in Q2, 2019), with an average of 7% data subscriber growth until now. The scenario is indicating the positive correlation of total subscriber and data subscriber growth. As long as the total subscribers' base will be increasing, data subscribers' base will aggregate in almost double rate.

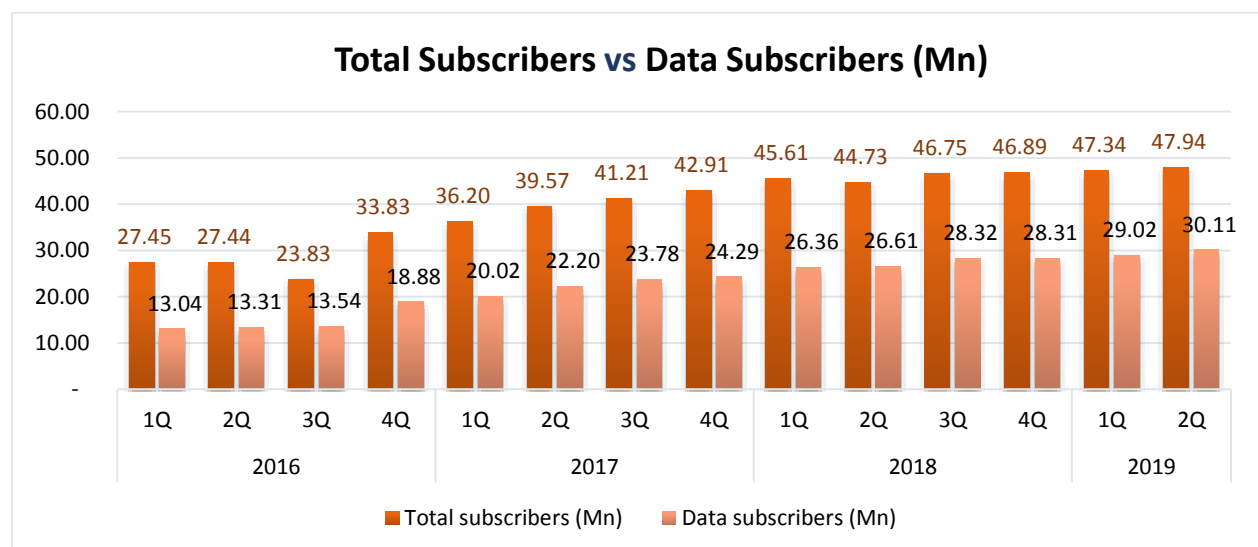


Figure 16: Increasing Total Subscribers vs Data Subscribers Base

- **Monthly Incremental Data Usage with Declining ARPU:**

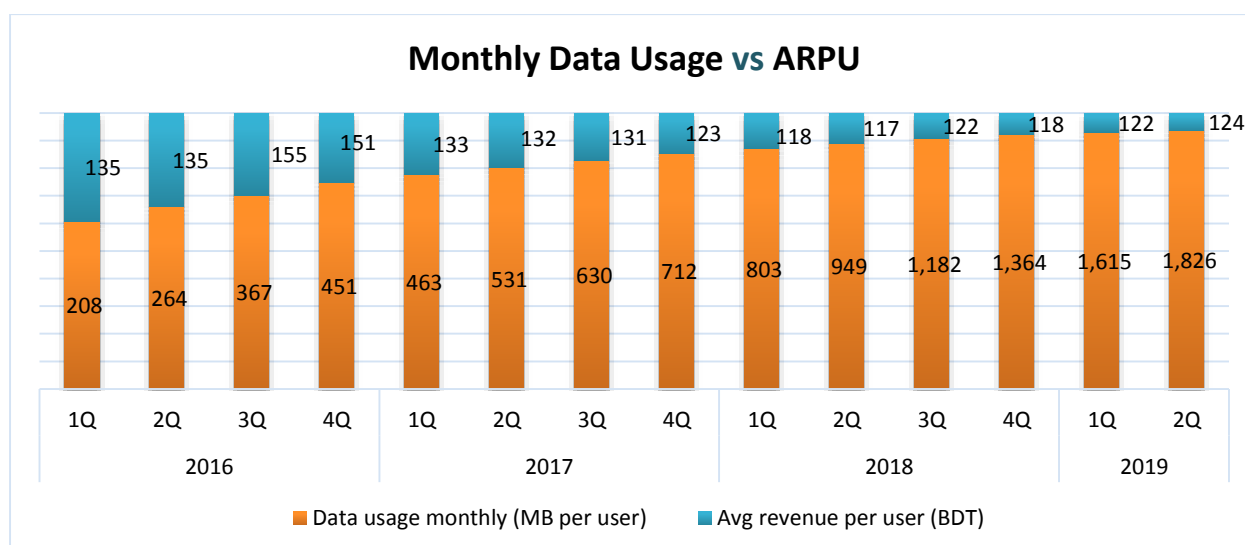


Figure 17: Monthly Incremental Data Usage with Declining ARPU

Due to the introduction of 3G, 4G along with launching of 4.5G network for Robi, data speed has been enhanced which enabled the subscribers consume more data package. As a result, monthly data usage per user is continuously increasing (from 208MB of 2016 to 1,826MB of Q2, 2019). Despite, incremental data subscribers along with data usage per month, the ARPU has been declining (from revenue of 135BDT/user until revenue of 124BDT/user), demonstrating overall loss of incremental revenue.

- **Downward Trend of Voice Revenue Compared to Increased Data Revenue:**

However, Data revenue is increasing (from 12% data revenue of 2016 until 27.85% data revenue of Q2, 2019), but Voice revenue is on decline (from 88% voice revenue of 2016 until 72.15% voice revenue of Q2, 2019) which is the main reason for the falling of ARPU. Due to enhance digitization, cost saving, unique features, convenience level option, consumers' attraction towards OTT is tremendous; resulting in a decline in voice communication. However, despite the downward voice revenue trend, the increasing data revenue trend is going

to be a worthy sign for Robi, as they can generate higher revenue from that source by investing more in unique digital services.

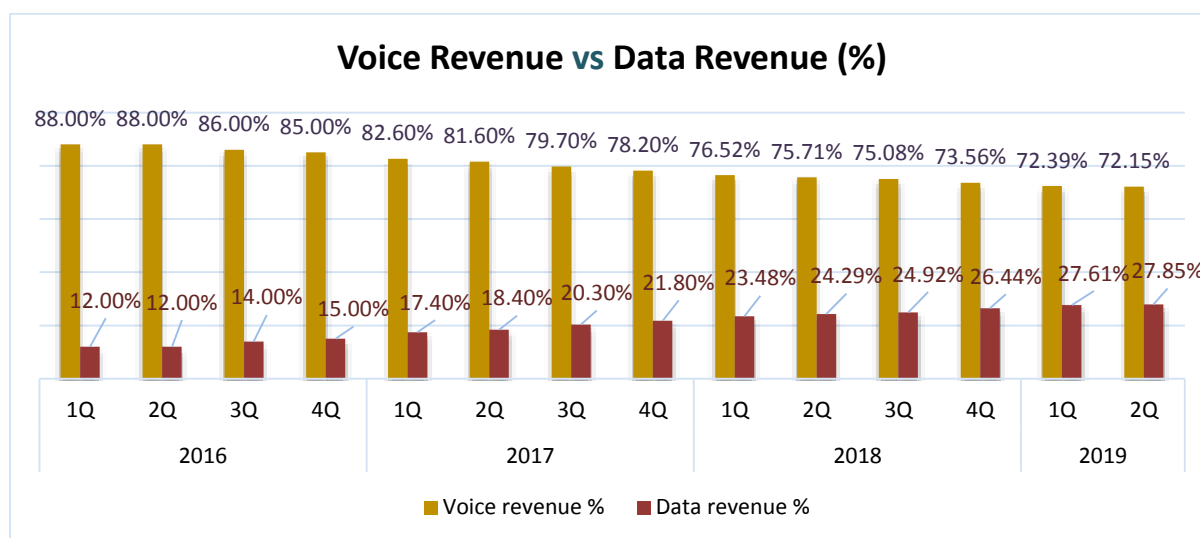


Figure 18: Incremental Data Revenue vs Declining Voice Revenue

▪ **Growing Data Traffic with Growing Data Revenue:**

Data traffic is the volume of data that consumers' buy whereas Data revenue is the revenue amount generated towards telecom operator from their data usage. With the incremental data subscribers' base, data traffic is going at a remarkable rate, which means consumers' are

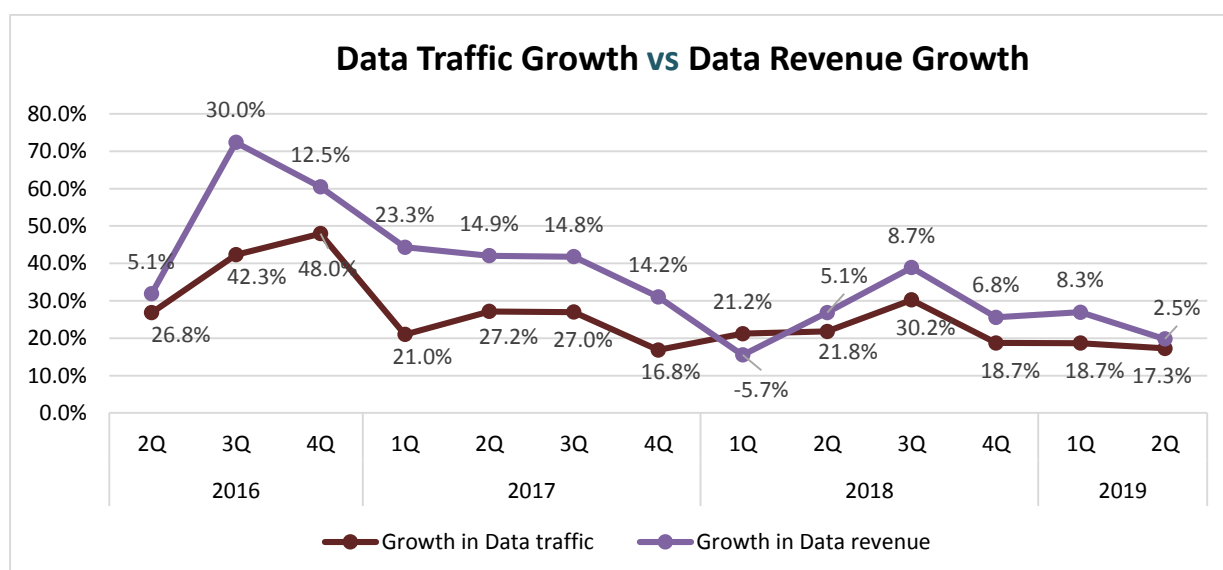


Figure 19: Growing Data Traffic with Growing Data Revenue

purchasing large volume of data package. In the contrary, the large volume of data volume should have generated the large amount of data revenue, which is not the case here. Since 2016, Data traffic is growing at an average rate of 25%; whilst, successive Data revenue is increasing at an average rate of only 8%, causing to the declination of ARPU.

▪ **Growing Subscribers Base with Inconsistent Voice Revenue Growth:**

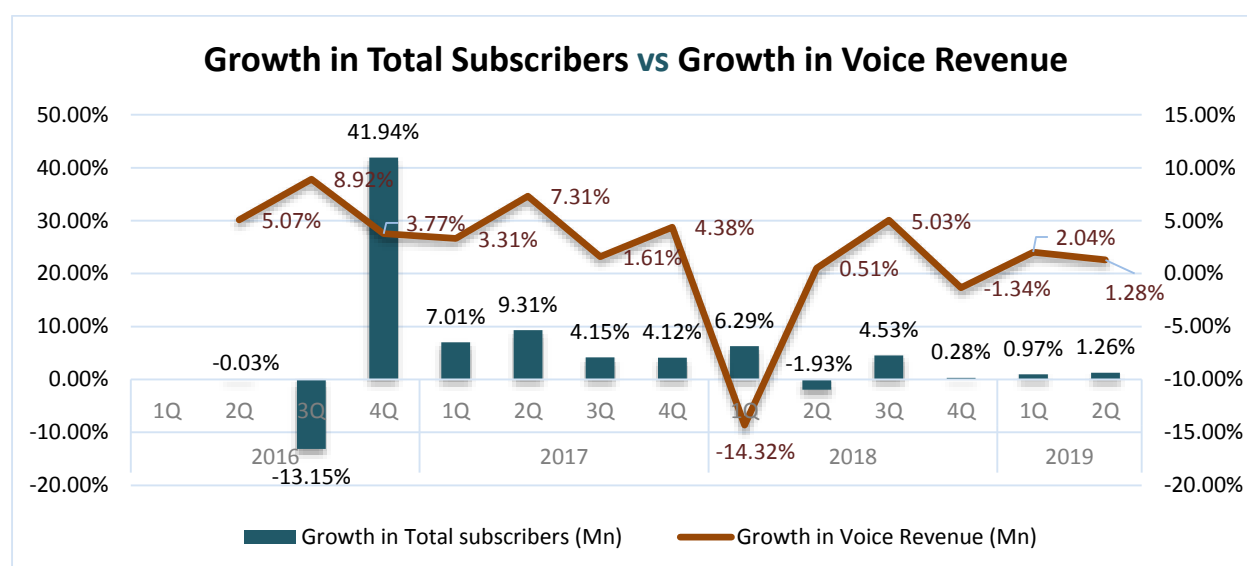


Figure 20: Growing Subscribers Base with Inconsistent Voice Revenue Growth

The growth total subscriber is positive except 3Q, 2016 and 2Q, 2018 due to the merger with Airtel and the establishment of 4.5G, which made the network worsening initially with slow data and hence, consumers switch to other operators at that time. Other than that, the positive growth of total Robi subscribers' base should have a positive impact on voice revenue, but the scenario is conflicting. Considering the trend, the growth in voice revenue is not consistent at all, with a remarkable fall in 1Q, 2018-voice revenue due to increased investment cost faced by Robi. However, the growth in voice revenue trend during other years are not up to the mark as consumers' are attracted towards OTT than voice communication.

3.5 Summary & Conclusion

Based on the survey from Robi internet users' it is quite clear that consumers are now preferring messaging for communication than voice calling and hence, the factors such as; increased features of OTT, cost advantage, smartphone and mobile penetration, convenience are leading the way towards their OTT adoption. Constructively, with declining voice revenue, the presence of OTT communication channels has assisted Robi in enhancing data revenue in a significant manner. At present, Robi has moved from being a core telecom service provider towards a digitized service provider by ensuring numerous digital solution in to its digital universe such as; Noor, My sports, BDapps, Robi Cash, Robi Tracker, BDtickets etc., which are eventually increasing their data revenue.

Considering the impact of OTT on telecom operator in light of Robi, for (2016-Q2, 2019), it is quite explicable that though the total subscribers and data subscribers base are increasing, with incremental monthly data usage, the average revenue per user is falling because the increasing data usage is not adequate to make up for the decline in voice revenue. Though there is sufficient data traffic, but data revenue are not up to the mark compared to the traffic because some of the revenue are going to global OTT service providers. This dilemma enforced the local telecommunication operators including Robi, to focus on other strategies than to focus only on the core telecom function of the business. However, the notable thing is that, now data is replacing voice portion of the revenue of Robi by establishment of digital solutions and by exploring innovative revenue streams to overcome the shortfall. Telecom operators are well prepared to confront OTT threat and generate positive outcome through OTT by evaluating consumers' allurements along with the factors that are leading to adoption of OTT services.

3.6 Recommendations

Transforming from a core telecom operator towards its vision of becoming *Best Digital Telco* through extreme invention and alteration, Robi is truly conducting a praiseworthy business. Based on the thrilling competition in the local telecommunication sector as well as, threat from global OTT, following recommendations might assist Robi to ensure their market position:

- *Digitized Business Model:* Though Robi has already converted themselves towards modern, agile and digital principles, but in order to cope up with global OTT along with local competitors, Robi must focus on continuous digital solutions by ensuring a digitized business model. Hence, Robi must outsmart the rivalry in a digital way and make the local players obsolete to thrive ahead. For example, Robi should focus on investing in Mobile Financial Service (MFS) solution for its customers' which will not only increase their revenue stream, but also will increase their customer base.
- *Invest in Establishing Unique Digital Services:* In order to be the digital pioneer in the competitive telecom industry, Robi should establish 5G network as soon as possible with initiating research and development lab based on Internet of Things to sustain in the IoT era. In addition, they need to invest in establishing unique digital services like smart solutions targeting both household and business sector.
- *Collaborating with OTT and Digital Service Providers:* By collaborating with the global OTT players, Robi can initiate a strategy for sustainable revenue growth. For example, a Malaysian telecom operator named DiGi telecommunications, partnered with WhatsApp by which the telecom operators' subscribers got unlimited access to WhatsApp service for a fixed fee. By initiating such collaboration with OTT will create a win-win situation for both of them. Other than that, by partnering-up with other Digital Service providers to

identify newer revenue streams with proper business continuity management Robi can sustain their position.

- *Initiating Lean Cost Structure:* In the saturated industry of telecommunication, where the incremental revenue margin in existing business is not that much satisfactory, Robi must work on Lean cost structure to reduce the product costs and improve financial sustainability.

However, the threat to telecom operators posed by global OTT is factual, and operators need to make strategies to respond in a positive way. To ensure sustainability, Robi need new revenue streams along with the expansion of fast, intelligent network and a widespread variety of new services, which can deliver their subscribers with the best possible experience by generating higher revenue source for Robi.

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Appendix

A1. Survey Questionnaire:

1. Do you use internet package of Robi?
 - a) Yes
 - b) No

2. Which of the following OTT communications (WhatsApp, Viber, Imo and Messenger) do you use in your smartphone using Robi Internet:

<i>OTT</i>	<i>Yes</i>	<i>No</i>
WhatsApp		
Viber		
Messenger		
Imo		

3. Please Rate your usage of the following communication channels using percentage (%):

<i>Year</i>	<i>2018</i>	<i>Current Year</i>
Robi Voice Call	_____ %	_____ %
Robi SMS	_____ %	_____ %
OTT	_____ %	_____ %
Total (100%)	_____ %	_____ %

4. Which one of the following is your top preference for communicating with others?
 - a) Voice call
 - b) Messaging

5. Please rank as (1-4: 1 being the least convenient, 4 being the most convenient) for the following four communication mediums based on your convenience of use:

<i>Communication Medium</i>	<i>Rank</i>
Messaging through apps	
Voice/video calling through apps	
Voice calling through mobile operator	
SMS/MMS	

6. Please rate (1-10: Lowest- Highest) based on your level of attraction towards the following features of OTT:

Features	1	2	3	4	5	6	7	8	9	10
a) Group chat										
b) Group call										
c) Video call										
d) Voice call										
e) Character										
f) Giphy (GIF)										
g) Location sharing										
h) Games										
i) Multimedia sharing										
j) Stickers										

7. Indicate your attitude towards the following issues:

Statements	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
a. I think using OTT messaging is cheaper for communication than using SMS/MMS services through mobile operator.					
b. Since I use smartphone, I tend to enjoy the variety of OTT communication apps.					
c. I prefer voice calling through OTT due to higher call rate (0.45 paisha per minute) of mobile operator.					
d. Using OTT is very convenient to me.					
e. Since I purchase internet data package, I prefer using OTT.					
f. I prefer using OTT for international calling than using voice call through mobile operator due to cost advantage.					
g. Since OTT have drastically reduced the cost for sharing information and content, I prefer using it.					
h. Messaging preferences have rapidly shifted my mindset from Telecom operators' SMS and MMS services towards OTT messaging services.					

8. Gender: a) Male b) Female

9. Age Group:

a) 18-28 years b) 29-39 years c) 40-50 years d) 50 and above

10. Occupation: a) Student b) Service holder c) Businessman

A2. Financial Performance Indicating items of Robi Axiata Limited:

<i>Financial Items(millions)</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>
Revenue	49,423	52,395	52,682	68,348	67,982
EBITDA	18,913	19,113	14,348	13,010	16,650
EBIT	8,852	8,123	(3,884)	(2,651)	(585)
Gross debt	9,033	15,004	32,562	29,934	30,036
Net assets	45,096	54,890	69,446	58,671	60,592
Net Income	4,397	4,004	(3,892)	(2,843)	2,147
Total Asset	54,129	69,894	102,008	88,605	90,628
Total Equity	45,165	50,013	65,124	59,868	60,072

Profitability Ratios Formula	Efficiency Ratios Formula	Leverage Ratios Formula
1. Operating Profit margin $\text{EBIT}/\text{Net Sales} \times 100$	1. Asset Turnover Ratio $\text{Total Sales} / \text{Total Asset}$	1. Debt to Equity Ratio $\text{Gross debt} / \text{equity} (x)$
2. Net Profit margin $\text{Net Income}/\text{Sales} \times 100$	2. Equity Turnover Ratio $\text{Total Sales} / \text{Total Equity}$	2. Debt Ratio (Debt to Asset Ratio) $\text{Gross debt} / \text{Total Asset} (x)$
3. Return on Asset $\text{Net Income}/\text{Total Asset} \times 100$		
4. Return on Equity $\text{Net Income}/\text{Total Equity} \times 100$		