

Malaysian Tier-2 Telecom Industry: An Analysis of Redtone International Berhad

¹ Johar MGM*, ¹Mohd Shukri Ab Yajid, ¹Ali Khatibi

¹Management and Science University

*Corresponding author: mdgapar@msu.edu.my

ABSTRACT

The objective of this case study is to examine and understand the Malaysian tier-2 Telco industry with special focus on Redtone International Berhad and its position in the market place. The case analysis includes application of models such as External / Internal Evaluation Matrix, Porter's Model, SPACE Matrix and Ansoff's Matrix. The methodology adopted for this case study is by industry observation through mass media, reference to company annual reports, collection of industry analysis, articles and information in the internet and referring to the company personnel.

Keywords: international Berhad, Redtone, telecommunication.

Correspondence:

Johar MGM
Management and Science University
Corresponding author: mdgapar@msu.edu.my

INTRODUCTION

Redtone International Berhad (Redtone) is the number one discounted call provider in Malaysia by revenue, and the first to be listed in the Malaysian Exchange for Securities Dealings and Quotation (MESDAQ) market. Redtone currently commands a market share of more than 30% of the discounted call market revenue. (Source: IDC). The market share in terms of revenue for year 2003 is as shown in Table 1.

Table 1: Discounted Call Market Share (2003)

| COMPANY | MARKET SHARE % |
|--|----------------|
| Redtone | 17.3 |
| Nextel | 12.0 |
| Extiva | 6.3 |
| FSBM-NetMedia | 6.0 |
| Jaring | 4.9 |
| NasionCom | 4.4 |
| Others – Time, Telekom Malaysia, DiGi, Xintel, Accos, Via Communication Network, etc | 49.1 |

Redtone International Bhd started as VMS Technology Sdn Bhd in 1996. The company secured its first customer in 1997 who is Malayan Sugar. It then signed on distributors for the TeleCARE product in Malaysia and Singapore viz O'Connors and Telekom Equipment Sdn Bhd. On September 17 the company gained MSC status and became a founding member of MSC. It also won the Best IT System award from Pikom Computimes. By this year the R&D team has grown to 30 people. The company obtained MSC R&D grant amounting to RM3.2m. It is the first company to be given such a big amount. It also won Best of TeleConnect Computer Telephony Expo Award in New York, USA.1999 was a boom year for Redtone. It rapidly rolled out new products every six month. R&D costs are a

continuous expense for the company to remain competitive and to keep abreast with the latest technology. Such R&D costs that do not meet the criteria of Research & Development costs are expensed off during the period incurred (Abubakar, Hashim, & Pour, 2019).

As part of future plans, the company intends to expand its business internationally. There are additional risks when it operates in foreign countries which include uncertainties in the foreign countries' local regulatory requirements, costs and risks in localizing software solutions for foreign markets, fluctuations in currency exchange rates, imposition of control on currency exchange, uncertainties in operational issue. The company conducts feasibility studies prior to making any decision in its penetration into a particular foreign country. Redtone presently derives most of its revenue in RM and USD while its costs are mainly in RM. Therefore it is not overly exposed to foreign exchange risk previously when the exchange rate of the USD was pegged at USD1.00 to RM3.80, but as the pegging was withdrawn there is now foreign exchange risk. Also as the company purchases its wholesale voice traffic in USD, it is subjected to foreign exchange risk (Adiri et al., 2017).

LITERATURE REVIEW

Redtone was granted MSC status in November 1997 by MDC. However the MSC status is subjected to continuous fulfillment of certain criteria. MDC being the body responsible for monitoring all MSC designated companies has the right to withdraw any company's MSC status at any time. Redtone's financial performance so far includes the MSC status Incentives. The Company is operating in the telecommunications industry which is subjected to supervision by the regulatory authorities that include the Communication and Multimedia Commission (CMC). The regulations set out by the authorities are subjected to change which may then affect certain operations of the company (binti Zaidi, binti Lokman, bin Daud, Achmad, & Chia, 2015). Redtone's ASP license issued under the

Malaysian Communication and Multimedia Act 1998 (CMA) which will expire in 2005 permits Redtone to provide discounted calls with value-added services (Ali & Pour, 2014).

Prior to joining Chemquest Sdn Bhd as Trading and Marketing General Manager in 1993, he served in various positions in the logistics and sales function of Exxon Chemical (M) Sdn Bhd in Malaysia and Singapore. He is currently the General Manager of Chemquest Sdn Bhd group of companies' manufacturing division (Hughes, Satasook, Bates, Bumrungsri, & Jones, 2011).

Aged 35. Obtained his Diploma in Electronic Engineering from Tunku Abdul Rahman College in 1992 and Engineering Council, UK Part I and II in Electronic Engineering in 1992. He is one of the founding members of Redtone International Berhad Group and has been with the group since 1996. Main responsibilities include designing and managing the hardware design and development of the Group's range of products such as Telecare Voice Mail System and Redtone TECS products. For the year ended 28 February 2005 the Redtone Group achieved 106.5% rise in revenue and 145.2% growth in profit after tax. The revenue hit RM174.7 million from RM84.6 million preform in 2004. Profit after tax rose to RM25.5 million from RM10.4 million preform in 2004 (Koedsin & Huete, 2015).

The strong performance is primarily due to the Group's ability to offer a wide range of discounted call services that cater to a well-diversified customer base. These are household users, small and medium enterprises (SME), foreign workers and corporate customers. Staff costs has increased from RM3,919,179 in 2004 to RM10,327,159 in 2005 representing 163%. This is mainly due to the increased number of staff from 144 in 2004 to 224 in 2005. The major components of staff costs are wages and salaries amounting to RM8, 665,987, pension costs (defined contribution plans) amounting to RM1, 005,500 and other staff related expenses amounting to RM495, 051. Call bandwidth cost has also increased by 242% from RM28, 045,130 in 2004 to RM95, 859,565 in 2005. This consists mainly of bandwidth leasing from third parties for voice traffic routing domestically and internationally (Phua, Tsuyuki, Furuya, & Lee, 2008).

However, the R&D expense is being charged to the group's income statement instead of being capitalized. The innovative R&D has enabled the group to roll out at least 3 products or services every year in order to stay forefront of the industry. Redtone is expected to launch two new products this year, which are wireless broadband and mobile phone rental service centers. However, it is only expected that these two products will start to contribute to the group's earnings in FY06 as it takes time for the consumers to accept the new products.

Redtone's products and services can be grouped into two categories, i.e.:

1. Discounted call service
2. Telecommunication products and services

Table 2: Discounted call service.

| Product / Service | Features | Target Market |
|-------------------|---|-----------------------------|
| Corporate Voice | <ul style="list-style-type: none"> • Postpaid telco grade quality service for IDD, | Large corporations and SMEs |

| | | |
|--------------------|--|---|
| | STD and mobile calls. <ul style="list-style-type: none"> • Wizard for IP telephony applications • Advanced call accounting system • Voice mail system • Total mobile savings | |
| Njoy | <ul style="list-style-type: none"> • Prepaid service • For fixed line and mobile telephones calling IDD and STD • For travelers oversea to call home | Consumers |
| Redtone Phone Card | <ul style="list-style-type: none"> • Prepaid service • For IDD, STD and mobile calls from Redtone public phone | General public, foreign workers, tourists |
| Redtone Call Shops | <ul style="list-style-type: none"> • Comfortable and private setting for phone calling service • Equipped with accounting software, PBX/phone switching system and business management software • Does not require coins or call card | General public, foreign workers, tourists |
| Redtone Payphone | <ul style="list-style-type: none"> • For retail outlets and small shop owners • Does not require coins or call card | General public, foreign workers, tourists |

| | | |
|--|---|--|
| | <ul style="list-style-type: none"> Records and displays call charges | |
|--|---|--|

Table 3: Telecommunication products and services

| Product / Service | Features | Target Market |
|---|---|------------------------------------|
| Redtone Wizard | <ul style="list-style-type: none"> A suite of IP telephony applications to improve productivity and reduce cost Phone book, call register, SMS, messaging, voice mail, computer telephony integration | Corporations, SMEs, Branch Offices |
| Telecare Voice Mail System | <ul style="list-style-type: none"> An advanced voice mail system An auto attendant with multilevel directory A voice-messaging system that works with Private Branch Exchanges (PBX) systems Can either be a stand-alone voice messaging or an auto attendant system. | Large corporations, SMEs |
| Telecare Advance Call Accounting System | <ul style="list-style-type: none"> An advanced accounting tool that keeps track of all telecommunication's expenditure. A superior software architecture that provides comprehensive | Large corporations, SMEs |

| | | |
|---|---|------------------------|
| | tracking and analysis of phone bills. | |
| Hospitality Suite | <ul style="list-style-type: none"> Software that provides service provisioning and management is of guest phone bills. | Hotels |
| Telco Access Gateway | <ul style="list-style-type: none"> A circuit switching solution. Supports pre-paid and post-paid products with caller identification authentication Supports multiple routes to improve call completion. | Telco Service Provider |
| Telco Billing and Payment Management System | <ul style="list-style-type: none"> A billing management solution. Includes analysis and reporting software. Supports flexible discounts, product mix and commission calculation. | Telco Service Provider |
| Gateway Performance and Call Traffic Monitoring | <ul style="list-style-type: none"> With real-time tracking and monitoring capability. Allows to proactively plan the increase of capacity and for the early detection of problems in the services provided. | Telco Service Provider |

Redtone is actively seeking for opportunities to venture to overseas countries especially in the ASEAN countries and OIC members region in promoting its products and services. The management of Redtone expects overseas revenue to account for 50% of the group's total revenue within three years, as they are gearing for the World Trade Organization (WTO) Free Trade agreement. The investment in overseas may be modeled in two ways.

i. Teaming up with a foreign partner on a profit sharing basis

ii. Operating the discounted call service business on its own by applying for the license on its own. This is dependent on the country's regulations.

The ventures which the company has entered into or in the process of entering are listed below.

1. In 2004, Redtone Telecommunications Sdn. Bhd. entered into a business collaboration agreement with Symbol Network Corporation Ltd (SNC) and Diversified Gateway Bhd (DGB) to offer discounted call services in Thailand through its Call shop and Payphone Services.

2. In 2004, Redtone Telecommunications Sdn. Bhd. entered into a joint venture agreement with Cyber Leap Data Solution Ltd to cooperate with each other in the business of operating and distributing telecommunications and software products and services in Bangladesh subject to terms and conditions stipulated in the said agreement through a new joint venture company known as Redtone Cyber leap BD Ltd. The joint venture has not yet commences operations.

3. On 6 May 2004, Redtone Technology Sdn Bhd. had incorporated a wholly owned subsidiary, Redtone Telecommunications Pakistan (Private) Limited. Redtone can now offer telephone and fax services via card payphones besides voice telephone services, data and IT services

4. On 25 May 2005, Redtone Technology Sdn. Bhd. entered into a collaboration agreement with PT Star Call Siskom for the provision of telecommunication services in Indonesia (Amin Beiranvand Pour & Hashim, 2015).

5. In 2005, entered collaboration with China TieTong Telecommunications Corporation Shanghai Branch Company to offer discounted call services to consumer and corporate customers in the Republic of China. This is for both fixed line and mobile subscribers.

Table 4: SEPT Analysis

| SOCIAL | ECONOMIC | POLITICAL | TECHNOLOGY |
|---|--|---|---|
| <ul style="list-style-type: none"> Changing lifestyle and increase sophistication towards ICT Demand for portability & mobility of devices Increase for on-demand & online services High customer | <ul style="list-style-type: none"> Local telco capex to grow at CAGR 10% GDP growth rate 5% - 6% in 2003, 2004 & 2005 Vibrant business environment - oriented economy | <ul style="list-style-type: none"> Ninth Malaysia Plan focus on ICT Government push for mergers and consolidation MSC continuing development National Broadband Plan - 5% | <ul style="list-style-type: none"> Convergence of computers and communications Online digital and internet revolution taking shape rapidly Broadband potential revenue thru video, games & audio |

| | | | |
|---|---|--|---|
| <ul style="list-style-type: none"> confidence & satisfaction of ICT services rendered Malaysian Quality of Life Index improved by 10% | <ul style="list-style-type: none"> supportive government policies & a large local business community Expansion & investment in foreign telcos ICT as engine of growth for increase productivity & wealth Foreign telco offer local services Opening up the last mile | <ul style="list-style-type: none"> penetration by 2006, 10% by 2008. World terrorism threat Market deregulation and liberalization High oil prices | <ul style="list-style-type: none"> VOIP over broadband network Award of 3G licenses and services rollout WiFi and WiMax wireless rollout plans |
|---|---|--|---|

The Malaysian society is experiencing a rapidly changing lifestyle and increase sophistication. The public are embracing the information and communications technology products and services well and moving into digital society. There is tremendous demand for portability and mobility of devices. There are currently about 4.4 million fixed line subscribers of which 66% are residential and 34% are businesses. This represents a penetration rate is about 17%. The growth of fixed line subscribers has declined slowly over the past five years due to availability of cellular telephones. There were 5 million cellular subscribers in 2000 and this has grown to about 16 million subscribers in 2005. This represents a penetration rate of about 61%. Short messaging system (SMS) has been a very popular application with a total of 3.4 billion SMSs. This is equivalent to an average of 215 SMSs per subscriber (Amin Beiranvand Pour, Hashim, & Marghany, 2014).

For internet take-up, there were 1.6 million dial-up subscribers in 2000. Currently there are 3.4 million subscribers. The penetration rate is 13.2%. For broadband, there were 20,000 subscribers in 2002. As of today there are 300,000 broadband subscribers representing a penetration rate of 1.2%. This figure is expected to increase rapidly as the availability of broadband infrastructure extends to sub-urban and remote areas. The number of household owned personal computers is 4.65 million representing a penetration of 18%. This is low due to the high price of a PC which is more than RM 1000 for an entry-level computer. The government and private corporations has embarked on several PC ownership campaigns to encourage people to buy and use PCs (A Beiranvand Pour, Hashim, & Sciences, 2015).

According to the Quality of Life Report produced by the Economic Planning Unit (EPU) in January 2005, the Malaysian Quality of Life Index (MLQI) has risen by 9.8 percentage points. This shows that Malaysia's quality of life has improved over the period of 1990 to 2002. Other areas are grid computing, radio frequency identification technology and internet protocol version 6. The government also wants wireless fidelity (WiFi) connectivity to be available in all schools.

The government has taken steps to implement the National Broadband Plan. The targets are to achieve 5% penetration by 2006 and 10% by 2008. Communities identified that will be connected as catalyst are government departments, schools, universities and research institutions, hospitals and clinics, libraries and community centers. The advent of new technologies such as VOIP, Broadband and Wireless (WiFi, WIMAX, and 3 G) created new products and services at affordable prices. With broadband, the Web content today for news, TV networks, newspapers and magazines have changed to rich media and multimedia. Media companies are more willing to invest to produce it as they recognize that more people are now using it. There is also broadband potential revenue thru video, online games, audio and voice through broadband phones.

Voice-over-Internet-Protocol (VOIP) has significantly changed the telecommunication scenario. The traditional voice service previously carried over PSTN has now switched to VOIP network which is much cheaper. However the service quality is initially lower but improving over time. This factor is acceptable to the general consumer and business which often is non-critical. The widely available cheap VOIP bandwidth and termination rates makes it attractive for new service providers to enter the playing field offering discounted calls to popular destinations serving certain segments of the market. This has created a very competitive landscape with Tier-1 service providers (Pradhan & Buchroithner, 2010).

The roll-out of 3G services represents a significant milestone in the development of telecommunications in the country. However the implementation of 3G raises concerns in three areas. Firstly, the introduction of new technology has the potential to accentuate or aggravate the digital divide that already exists, particularly in the areas of affordability and access. Secondly is the availability of content, especially local content. It is one of the critical success factors of 3G. Thirdly, 3G as a powerful medium for access to information services, especially in locations that do not have access to fixed line services.

Internal Factor Evaluation Matrix

ANALYSIS

The weightage are industry-based where 0.0 is least important and 1.0 is most important. The ratings are company-based where:

- Major strength = 4
- Minor strength = 3
- Minor weakness = 2
- Major weakness = 1

Table 5: Internal Factors – Strengths and Weaknesses

| Strengths | Weightage | Rating | Total Weight |
|-----------|-----------|--------|--------------|
| | 0.2 | 4 | 0.8 |

| | | | |
|--|------------------|---------------|---------------------|
| 1. Responsive in-house R&D team | | | |
| 2. Own Intellectual Property Rights | 0.2 | 4 | 0.8 |
| 3. MSC status incentives | 0.05 | 3 | 0.15 |
| 4. 5 years of revenue growth | 0.15 | 3 | 0.45 |
| 5. Large customer base | 0.15 | 3 | 0.45 |
| Weaknesses | Weightage | Rating | Total Weight |
| 1. Limited range of products | 0.1 | 2 | 0.2 |
| 2. Does not own infrastructure | 0.1 | 2 | 0.2 |
| 3. Dependent on inter-connectivity with other telcos | 0.05 | 2 | 0.1 |
| Total | 1 | | 3.15 |

The total weightage shows that the management of Redtone is very seriously giving attention to the internal factors.

External Factor Evaluation Matrix

The weightage are industry-based where 0.0 is least important and 1.0 is most important. The ratings are company-based where:

Table 6: External Factors – Opportunities and Threats

| Opportunities | Weightage | Rating | Total Weight |
|---|-----------|--------|--------------|
| 1. Replicate business model in developing countries | 0.2 | 3 | 0.6 |
| 2. Investment & expansion overseas | 0.3 | 4 | 1.2 |
| Threats | Weightage | Rating | Total Weight |
| 1. Competition from 1 st tier telcos | 0.1 | 2 | 0.2 |
| 2. Competition from other 2 nd tier telcos and service providers | 0.1 | 2 | 0.2 |
| 3. Foreign exchange risk on wholesale traffic purchase | 0.3 | 1 | 0.3 |
| Total | 1 | | 2.5 |

The total weightage shows that the management of Redtone is very keen to take advantage of the opportunities available and matching the challengers posed by threats.

Diagnosis of Redtone International Berhad

1. Redtone has a limited range of products, the core being discounted voice calls. Others are IP telephony applications and telco service provisioning solutions. It is facing fierce competition from tier-1 telcos which are capable of lowering their voice call rates which will have negative impact on Redtone.

2. Redtone being a tier-2 telco does not own their domestic and international network infrastructure. Instead they lease from local tier-1 telcos and international bandwidth provider. Although this saved the company from huge investment cost, this may increase

operational cost due to uncontrollable price fluctuations factors.

3. The international network infrastructure is very much subjected to foreign exchange risk on wholesale traffic purchase. Any increase will reduce the revenues generated since Redtone is focusing much on international traffic.

4. Calls originating from and terminating to Redtone's subscribers will mostly be other telco's subscribers. This is dependent on the interconnectivity agreement with the other telcos and subjected to operations and maintenance of their network. Any major failure or disruptions will have a negative impact on Redtone.

5. Other tier-2 telcos such as Nasioncom and Xintel are competing with Redtone. These service providers are also offering internet access and broadband telephones. Redtone's main target market for voice calls are foreign workers, foreign students and foreign tourist. These segments are subjected to factors such as government policies, political relationship and environmental conditions such as SAR epidemic, tsunami and terrorism (Reza, Eswaran, & Hati, 2008).

Reasons for Weaknesses and Threats

Table 7: Reasons for Weaknesses

| Weaknesses | Reasons |
|--|---|
| 1. Limited range of products | Redtone has small staff strength of 150 only, of which 50 is in the R&D. The investment in R&D is also small of about RM10 million only. |
| 2. Does not own network infrastructure | Investments to build own network infrastructure is huge. Instead opted to lease domestic and international network infra from telcos and bandwidth suppliers. |
| 3. Dependent on interconnectivity with other telcos. | Being a tier-2 telco and without previous customer base, Redtone has to interconnect with other telcos to terminate their customers' calls to generate revenue. |

Table 8: Reasons for Threats

| Threats | Reasons |
|-----------------------------------|--|
| 1. Competition from tier-1 telcos | Tier-1 telcos with their extensive financial and network resources are able to compete by lowering their rates and capitalizing their branding and reputation. |
| 2. Competition from tier-2 telcos | Due to market deregulation, more players are entering the market. Examples are Nasioncom and Xintel which |

| | |
|--|--|
| | offers similar products and services. |
| 3. Foreign exchange risk for wholesale traffic | Redtone purchase wholesale traffic terminations to foreign destinations from international bandwidth suppliers. These businesses are based on foreign currencies which fluctuate frequently. |

TOWS Matrix

Strengths (S)

1. Responsive in-house R&D team
2. Own Intellectual Property Rights
3. MSC status incentives
4. 5 years of revenue growth
5. Large customer base

Opportunities (O)

1. Replicate business model in developing countries
2. Investment & expansion overseas

Table 9: SO Strategy – Maximise S Maximise O

| S O | Maximize S and Maximize O | Strategy |
|-------|--|----------------------------|
| S1 O1 | Customize products for new markets | Market development |
| S1 O2 | Create new products for new markets | Product development |
| S2 O1 | Utilize IP Rights for new markets | Market development |
| S2 O2 | Identify and enter new markets | Market development |
| S3 O1 | Create high value products for new market | Product development |
| S3 O2 | Enter new markets with high value products | Market development |
| S4 O1 | Expand business model to include related products & services | Concentric diversification |
| S4 O2 | Introduce TQM to meet specific demand of world | Differentiation |
| S5 O1 | Upgrade products & services for new markets | Market development |
| S5 O2 | Create new products for new markets | Product development |

WO Strategy – Minimise W Maximise O

Weaknesses (W)

1. Limited range of products
2. Does not own infrastructure
3. Dependent on inter-connectivity with other telcos

Opportunities (O)

1. Replicate business model in developing countries
2. Investment & expansion overseas

Table 10: WO Strategy – Minimise S Maximise O

| W O | Minimize W and Maximize O | Strategy |
|-----|---------------------------|----------|
|-----|---------------------------|----------|

| | | |
|-------|---|--------------------|
| W1 O1 | Market existing products in other countries | Market development |
| W1 O2 | Customized existing products for other countries | Market development |
| W2 O1 | Partnership with other infra provider s | Joint venture |
| W2 O2 | Partnership with other service providers | Joint venture |
| W3 O1 | Interconnect with other telcos in other countries | Market development |
| W3 O2 | Partnership with other telcos | Joint venture |

ST Strategy – Maximise S Minimise T

Strengths (S)

1. Responsive in-house R&D team
2. Own Intellectual Property Rights
3. MSC status incentives
4. 5 years of revenue growth
5. Large customer base

Threats (T)

1. Competition from 1st tier telcos
2. Competition from other 2nd tier telcos and service providers
3. Foreign exchange risk on wholesale traffic purchase

Table 11: ST Strategy – Maximise S Minimise T

| S T | Maximize S and Minimize T | Strategy |
|-------|--|---------------------|
| S1 T1 | Create innovative products for customers | Product development |
| S1 T2 | Create leading-edge products | Differentiation |
| S1 T3 | Increase productivity at reduced cost | Cost leadership |
| S2 T1 | Create competitive products | Product development |
| S2 T2 | Create differentiated products | Differentiation |
| S2 T3 | Create products at low cost | Cost leadership |
| S3 T1 | Create products at low cost | Cost leadership |
| S3 T2 | Create products at low cost | Cost leadership |
| S3 T3 | Create products at low cost | Cost leadership |
| S4 T1 | Focus on discounted call services | Focus strategy |

| | | |
|----------|---|-----------------|
| S4 T2 | Focus on service quality & customer service | Focus strategy |
| S4 T3 | Bargain for fixed exchange rate traffic purchase | Cost leadership |
| S5 T1 | Create differentiated products | Differentiation |
| S5 T2 | Create differentiated products | Differentiation |
| S5 T3 | Bargain for cheaper wholesale rate traffic purchase | Cost leadership |

WT Strategy – Minimise W Minimise T Weaknesses (W)

- Limited range of products
- Does not own infrastructure
- Dependent on inter-connectivity with other telcos

Threats (T)

- Competition from 1st tier telcos
- Competition from other 2nd tier telcos and service providers
- Foreign exchange risk on wholesale traffic purchase

Table 12: WT Strategy – Minimise W Minimise T

| W T | Minimize W and Minimize T | Strategy |
|----------|--|----------------------|
| W1 T1 | Aggressive marketing and promotions | Market penetration |
| W1 T2 | Customized existing products to suit market | Differentiation |
| W1 T3 | Increase productivity and reduce cost | Cost leadership |
| W2 T1 | Collaborate with 1 st tier telcos | Backward integration |
| W2 T2 | Collaborate with 2 nd tier telcos and service providers | Forward integration |
| W2 T3 | Negotiate for long term fixed price of wholesale traffic | Cost leadership |
| W3 T1 | Collaborate with 1 st tier telcos | Backward integration |
| W3 T2 | Collaborate with 2 nd tier telcos and service providers | Backward integration |
| W3 T3 | Negotiate for long term fixed price of wholesale traffic | Cost leadership |

The External Factors Evaluation (EFE) matrix is an analysis that evaluates an organization’s response to threats and its’ strategies to capitalize on opportunities. The analysis summarized and evaluates external factors such as economic, social, cultural, demographic, environmental, political, governmental, and technological and competitiveness. The EFE matrix for Redtone is shown below.

Table 13: External Factors Evaluation Matrix

| Opportunities | Weightage | Rating | Total Weight |
|--------------------------------|-----------|--------|--------------|
| 1. Replicate business model in | 0.2 | 3 | 0.6 |

| | | | |
|---|------------------|---------------|---------------------|
| developing countries | | | |
| 2. Investment & expansion overseas | 0.3 | 4 | 1.2 |
| Threats | Weightage | Rating | Total Weight |
| 1. Competition from 1 st tier telcos | 0.1 | 2 | 0.2 |
| 2. Competition from other 2 nd tier telcos and service providers | 0.1 | 2 | 0.2 |
| 3. Foreign exchange risk on wholesale traffic purchase | 0.3 | 1 | 0.3 |
| Total | 1 | | 2.5 |

Redtone scores 2.5 points for the EFE shows that the company is responding positively to the threats and has taken strategies to capitalize on the opportunities. It is planning to replicate the business model and invest and expand regionally to Pakistan, China and Indonesia. However the threat of foreign exchange remains for its domestic market since the company purchase wholesale traffic in foreign currencies (Suman et al., 2017).

Table 14: Strategic Position and Action Evaluation (SPACE) Matrix

| Financial Strength | Ratings | Average Score |
|-------------------------------------|---------|---------------|
| • Return on investment | 4 | 4 |
| • Leverage | 3 | |
| • Liquidity | 5 | |
| • Working capital | 4 | |
| • Cash flow | 3 | |
| • Ease of exit from market | 5 | |
| • Risk involved in business | | |
| Competitive Advantage | | -3.9 |
| • Market share | -5 | |
| • Product quality | -5 | |
| • Product life cycle | -5 | |
| • Customer loyalty | -2 | |
| • Competitor’s capacity utilization | -2 | |
| • Technology know-how | -6 | |
| • Vertical integration | -2 | |
| Industry Strength | | |

| | | |
|---|--|-------------|
| <ul style="list-style-type: none"> • Growth potential • Profit potential • Financial stability • Technology know-how • Resource utilization • Capital intensity • Ease of entry into market • Capacity utilization | 6 5 5 3 4 5 2 4 | 4.3 |
| Environmental Stability <ul style="list-style-type: none"> • Technological changes • Rate of inflation • Demand variability • Price range of competing products • Barriers to entry to market • Competitive pressure • Price elasticity of demand | -4 -4 -5 -5 -2 -3 -4 | -3.9 |

| | |
|---|---|
| <ul style="list-style-type: none"> • Multi Line Wartel Phone • Full Service • Wizard • Telecare | <ul style="list-style-type: none"> • Innovate products |
|---|---|

DISCUSSIONS AND CONCLUSIONS

Conclusion: Redtone must focus on the following strategies in order of priority:

1. Market penetration
2. Market development
3. Product development
4. Diversification

The voice call market is fast becoming competitive firstly because the number of players in the industry is increasing by day due to the low entry barrier. The MCMC has so far issued ninety ASP licenses which allow licensees to offer various applications-based services with low capital investment. Secondly, the Malaysian market size itself is limited in terms of population compared to other countries like Indonesia, Thailand, India and China. Thirdly, voice call rates is getting lower due to stiff competition amongst the local players and the cost of terminating calls at different parts of the world is also getting lower. Due to these factors, beyond the next two years the discounted voice call business may reach maturity and therefore growth will be slower. It is expected that Redtone would face declines in revenues unless consumptions improve tremendously to offset this effect. It is therefore critical for Redtone at this juncture to devise and implement major growth strategies. Below are the recommended plans to be implemented by Redtone:

The business venture in Pakistan which started in 2004, must be able to generate revenue by now. As the license awarded covers voice telephony, data, IT services and payphones, it provides a big potential market for Redtone to offset any decline in revenue from Malaysian operations. Other overseas business ventures that have been started in China, Indonesia and Thailand need to be speeded up so as to generate the required revenue as soon as possible. It is highly recommended that these ventures be ready operationally by end of 2005 and start to generate revenue in January 2006 (Zaki, Shafait, & Mian, 2017).

Broadband telephony is taking up in Malaysia in-line with the increasing take-up of broadband internet. Broadband internet is offered by the ISPs namely TM Net, Time Dot Com, Jaring and other smaller players. Presently there are about 300,000 broadband subscribers, but the government is making various initiatives to achieve at least 5% and 10% broadband penetration by 2006 and 2008 respectively according to the National Broadband Plan. This worked out to be 1.15M and 2.3M subscribers in 2006 and 2008 respectively.

Broadband telephony works the same way as normal telephone, except that it rides on the broadband internet infrastructure. A broadband phone is required to make/receive calls which are connected to the broadband internet line or the computer can also be used to make/receive calls with special software (soft phone). As the current Redtone's ASP license covers this service, the only other requirement is to apply for the 015 number which are allocated to broadband telephony service providers. Currently ISPs which are already allocated this 015 number are Jaring and TM Net. Interconnection is also

This is where the company markets completely new products to new customers. There are two types of diversification, namely related and unrelated diversification. Related diversification means that the company remains in a familiar market or industry. Unrelated diversification is where the company has neither previous industry nor market experience (Tiwari & Shandilya, 2010).

Table 15: Ansoff's Product/Market Matrix for Redtone

| Product \ Market | Present | New |
|------------------|--|---|
| Present | <ul style="list-style-type: none"> • Corporate Voice • Njoy • Phone Cards • Call Shops System • Multi Line Wartel Phone • Full Service • Wizard • Telecare | Product Development <ul style="list-style-type: none"> • IP phones • Voice activation phones |
| New | <ul style="list-style-type: none"> • Corporate Voice • Njoy • Phone Cards • Call Shops System | Related Diversification <ul style="list-style-type: none"> • Upgrade products • Customized products |

required between these companies to enable their 015 subscribers to communicate. 015 subscribers can also make call and receive calls to/from fixed line and mobile phones.

Broadband telephony can be considered as a substitute product to discounted voice calls made from fixed line and mobile telephones. It is expected that as broadband penetration increases, people will use broadband telephony. This will definitely lower the present revenue stream. By acting as a broadband telephony service provider, Redtone can mitigate this effect. It is recommended that Redtone immediately launch this service by fourth quarter of 2005 (Zoheir & Emam, 2014). Redtone has been making statements about this new service since July 2005. This new service is expected to be launched in 3QFY2006 together with the deployment of new mobile telephone sets. This service will enable Malaysian travelers to make discounted calls when they are overseas without the normal roaming charges which are very high. Redtone is also able to operate this service from other countries thus enabling travelers from those countries to get same benefits when they traveling in other countries. It is also recommended that Redtone immediately launch this service by fourth quarter of 2005. This is to coincide with the school holiday season and celebrations in Malaysia where most people would want to travel overseas.

Redtone's R&D has developed an electronic payment system used internally by their 10,000 agents nationwide. This system has proven to be reliable, secure and user friendly. Redtone needs to enhance and upgrade this system from the security aspect to support commercial deployment. This system can then be used with other parties especially in the mobile content industry with mobile operators to offer subscriber's e-commerce supported services. Its subsidiary, Mobile Money International Sdn Bhd can be used as a vehicle for this purpose. This will become another revenue stream for Redtone. It is recommended that Redtone commercialized this product by December 2005.

Redtone applied for and was awarded a network service provider license (NSP) by the Malaysian Communications and Multimedia Commission (MCMC) which means the company can now offer a broader range of services similar to those provided by a full-fledged telco, except that Redtone will not build physical infrastructure. The company can now provide data services, an area which has great potential especially among the SMEs (small and medium-sized enterprises). At the same time, Redtone can purchase domestic interconnect minutes at mandatory rate which is lower than what has previously paid as an ASP (application service provider). Redtone will also be able to get unrestricted access to interconnect capacity or minutes from local telcos, meaning the company is assured of capacity which augurs well with the rapid growth of the business, besides getting unrestricted network connection to all global telcos as well. It is recommended that Redtone starts providing some of these new services by December 2005.

Besides growth strategy, Redtone must also implement market strategy to strengthen its present position. The company must clearly differentiate its position to address each market segment within the ASP industry by strategically positioning its services and products to beat competition and capitalize on opportunities. In addition the marketing strategy is to ensure that the company delivers innovative services and products that suit the specific need and requirements of each segment.

The company has to continue leveraging on capable partners to market its services and products in order to grow its business beyond the constraints of its sales and marketing staff. In addition, Redtone has to constantly seek and explore new business arrangements to enhance or complement the business strategy.

The company must continue to invest in building awareness of and preference for the Redtone brand through a combination of marketing, advertisement and public relation activities. With these strategies, the company should be able to reinforce its lead as the number one ASP in Malaysia as well as continue to grow its market share in brand sensitive market segments.

The company has a dynamic organization that has demonstrated rapid growth and major accomplishment over the last five years. Hence, Redtone has to develop an effective strategy to support and maintain the human resources growth by offering training programmes, competitive remuneration packages and flexible working environment. Redtone places strong emphasis on R&D and technical employees in order to achieve indigenous technology, services and products innovation as well as offering premier quality service. In order to maintain these personnel, the company has to provide the staff with competitive remuneration packages. In addition they must be encouraged to attend trainings to keep abreast with the latest developments.

It is recommended that the company provides staff training and development through on-the-job-training and in-house training programs. On-the-job-training is an effective means of providing practical training for its employees. In addition, the employees should also be given chance to attend both technical and managerial courses externally. Overseas expansion and replication of the business model seems to be the top agenda of Redtone's management. It is believed that with the strong management team, prudent financial management, good corporate governance and innovative product development, the company would be at par with the best tier-1 telecommunication company not only in Malaysia but also in the country where it competes.

REFERENCES

1. Abdullah, D. B., Abdullah, M. Y., & Salleh, M. A. M. (2017). A review on the concept of Fourth Industrial Revolution and the government's initiatives to promote it among youths in Malaysia. *e-Bangi*, 14(7).
2. Abubakar, A. J. a., Hashim, M., & Pour, A. B. (2019). Identification of hydrothermal alteration minerals associated with geothermal system using ASTER and Hyperion satellite data: a case study from Yankari Park, NE Nigeria. *Geocarto International*, 34(6), 597-625.
3. Adiri, Z., El Harti, A., Jellouli, A., Lhissou, R., Maacha, L., Azmi, M., . . . Bachaoui, E. M. (2017). Comparison of Landsat-8, ASTER and Sentinel 1 satellite remote sensing data in automatic lineaments extraction: A case study of Sidi Flah-Bouskour inlier, Moroccan Anti Atlas. *Advances in Space Research*, 60(11), 2355-2367.
4. Ali, A. S., & Pour, A. B. (2014). Lithological mapping and hydrothermal alteration using Landsat 8 data: a case study in ariab mining district, red sea hills, Sudan. *International Journal of Basic*
5. *Applied Sciences*, 3(3), 199.

6. binti Zaidi, N. I., binti Lokman, N. A. A., bin Daud, M. R., Achmad, H., & Chia, K. A. (2015). Fire recognition using RGB and YCbCr color space. *ARPN Journal of Engineering Applied Sciences*, 10(21), 9786-9790.
7. Hughes, A. C., Satasook, C., Bates, P. J., Bumrungsri, S., & Jones, G. (2011). Explaining the causes of the zoogeographic transition around the Isthmus of Kra: using bats as a case study. *Journal of Biogeography*, 38(12), 2362-2372.
8. Koedsin, W., & Huete, A. (2015). Mapping rubber tree stand age using Pléiades Satellite Imagery: A case study in Talang district, Phuket, Thailand. *Engineering Journal*, 19(4), 45-56.
9. Phua, M.-H., Tsuyuki, S., Furuya, N., & Lee, J. S. (2008). Detecting deforestation with a spectral change detection approach using multitemporal Landsat data: A case study of Kinabalu Park, Sabah, Malaysia. *Journal of Environmental Management*, 88(4), 784-795.
10. Pour, A. B., & Hashim, M. (2015). Integrating PALSAR and ASTER data for mineral deposits exploration in tropical environments: a case study from Central Belt, Peninsular Malaysia. *International Journal of Image Data Fusion*, 6(2), 170-188.
11. Pour, A. B., Hashim, M., & Marghany, M. (2014). Exploration of gold mineralization in a tropical region using Earth Observing-1 (EO1) and JERS-1 SAR data: a case study from Bau gold field, Sarawak, Malaysia. *Arabian Journal of Geosciences*, 7(6), 2393-2406.
12. Pour, A. B., Hashim, M., & Sciences, S. I. (2015). Geological structure mapping of the bentong-raub suture zone, peninsular Malaysia using palsar remote sensing data. *ISPRS Annals of the Photogrammetry, Remote Sensing*, 2(2), 89.
13. Pradhan, B., & Buchroithner, M. F. (2010). Comparison and validation of landslide susceptibility maps using an artificial neural network model for three test areas in Malaysia. *Environmental Engineering Geoscience*, 16(2), 107-126.
14. Reza, A. W., Eswaran, C., & Hati, S. (2008). Diabetic retinopathy: A quadtree based blood vessel detection algorithm using RGB components in fundus images. *Journal of medical systems*, 32(2), 147-155.
15. Suman, S., Hussin, F. A., Malik, A. S., Ho, S. H., Hilmi, I., Leow, A. H.-R., & Goh, K.-L. J. A. S. (2017). Feature selection and classification of ulcerated lesions using statistical analysis for WCE images. *Applied Sciences*, 7(10), 1097.
16. Tiwari, N., & Shandilya, M. (2010). Secure RGB image steganography from pixel indicator to triple algorithm-an incremental growth. *International Journal of Security Its Applications*, 4(4), 53-62.
17. Zaki, H. F., Shafait, F., & Mian, A. (2017). Learning a deeply supervised multi-modal RGB-D embedding for semantic scene and object category recognition. *Robotics Autonomous Systems*, 92, 41-52.
18. Zoheir, B., & Emam, A. (2014). Field and ASTER imagery data for the setting of gold mineralization in Western Allaqi-Heiani belt, Egypt: A case study from the Haimur deposit. *Journal of African Earth Sciences*, 99, 150-164.