Analysis of the Operations Management Strategy of a Telecommunication Company in Malaysia

Habibah @ Norehan Haron, Nabihah Hashim, S Umeesh Kumar Suppramaniam, Fazarizul Hashidi Bin Muhammad Pauzi, Suriya Narhayhanen @ Subramaniam Rama Naidu
Razak School of Engineering and Advanced Technology
Universiti Teknologi Malaysia
Jalan Sultan Yahya Petra, 54100 Kuala Lumpur, Malaysia
habibahharon.kl@utm.my, nabihah@tmrnd.com.my, umaeshcom@yahoo.com, fazarizul.hashidi@gmail.com, suriya5@live.utm.my

Abstract

The transformation of telecommunication industry in Malaysia has seen dramatic changes in the last decade. This industry provides high speed data, voice services, graphics, television, and video at increasing speeds and through diversity of channels. While fixed-line telephonic communication is still the core service mode, wireless communication, internet, cable and satellite program distribution are improving their share in the overall industry earnings. To sustain productively in this industry, operations strategy and critical decisions are important aspects of operations management. This paper reports the analysis on the operations management strategies of a telecommunication company (named TC) in Malaysia. The current challenges that play an important part in deriving and developing effective operations strategies to be in line with the mission and vision of the organization are identified. Analyses on the company’s strengths, weaknesses, opportunities and threats (SWOT) and the factors affecting the company mission provide the necessary information in helping the company management to make critical decisions in developing its operations management strategies. The final section discusses the global operations management mission and strategy that would be additional values.

Keywords
Operations management, Telecommunication Company, strategy development, mission, SWOT

1. Introductions

As telecommunications and computing technologies continue to evolve and shape the national as well as global business environment, the high speed broadband Internet readiness of every country becomes an increasingly important aspect in influencing the country's global competitiveness. With the emergence of High Speed Broadband (HSBB) in recent years, the transformation of the telecommunication industry in Malaysia has shown a dramatic positive change. Malaysian lifestyle and business operations has changed dramatically with the introduction of teleworking, smart home and tele-health. With support from the Government, HSBB become key national infrastructure initiative which will allow Malaysia to enhance its economic competitiveness in the region. It helps attract FDI to invest in the country as well as accelerate the nation’s ICT and high-tech aspirations and agenda, which is an enhanced skills and knowledge capital workforce. The Telecommunication Company (not the real name but shall be referred to as TC in this article) has taken a leading role in implementing and realizing the National Broadband Initiative (NBI). The project of High Speed Broadband (HSBB) started in March 2010. It has shown positive results where now there are 2.17 million customers having access to high speed internet. HSBB effectiveness in providing high-speed internet to users consequently inspired TC to carry out the implementation of

© IEOM Society International
High Speed Broadband Initiative 2 (HSBB2) and Broadband Initiative Sub-City (SUBB) in the country. This is TC’s initiatives in expanding the high-speed internet coverage area.

Managing a service system has become a major challenge to TC in the global competitive environment, looking at its current impact on digitization (the mass adoption of connected digital technologies and applications by consumers, enterprises, and governments). These challenges have driven TC to make critical strategic and operational decisions in order to sustain the business in this industry. These decisions are critical in handling how the company tries to monetize their infrastructure investments and exploding data traffic, increase newly needed competencies, streamline their product and service offerings, improve the customer experience, and evolve their asset portfolios and business models.

1.1 The Telecommunication Company (TC) background

TC provides a comprehensive range of communication services and solution in broadband, data and fixed lines. The company was incorporated in 1984 and its headquarters is in Kuala Lumpur, Malaysia. With over 2.2 million broadband customers, TC has secured the position of the country’s top broadband provider. TC serves about 2.3 million phone customers and 345,597 lines come from small and medium enterprise broadband clients. The company sees itself as changing the way Malaysians communicate, connect and collaborate with a strong emphasis on innovation. To become the converged communication provider in Malaysia, TC venture into the Long Term Evolution (LTE) for 4G businesses. In 2015, TC becomes Malaysia’s Convergence Champion and No. 1 Converged Communication Service Provider.

1.2 Company (TC) Vision and Mission

TC vision is “To make life and business easier, for a better Malaysia” and the company has three main missions that encompass customers, industries and nation as follows:-

- **We deliver Life Made Easier**
  1. To customers, through converged lifestyle communication experiences
  2. To businesses, by collaborating with and supporting them with integrated solutions
  3. To the nation, by supporting socio-economic development through education, innovation & social initiatives

The company has targeted to achieve lesser complaint every year. Other than that, as the first Telco service provider in the country, TC also gives back to the society by providing scholarships for education and having its own colleges and a university. The company has its own philosophy and values which is Customer, One Mindset, Operation, Leadership or known as C.O.O.L.

To support the vision and mission of the company, every division has their own mission. For instance, the mission for TC operational division is “Operational excellence and Capital productivity”. This mission is in line with the company’s vision and mission.

2.0 Operations Management

Operations management is about managing resources in product manufacturing or providing services by the organization (Horváthová and Davidová, 2011). The resources include people, processes, technologies and data. An important part of operations management is to analyze operations and develop an effective working strategy (Forro, 2007). Operations are a process that transforms inputs (people, resources, technologies and data) into outputs (products or services). Operations manager is accountable for managing the transformation process. According to Forro (2007), there are three vitally important aspects of service provision: paying attention to competencies and their continuous development, establishing collaborative relationships and empowering service employees.
2.1 Competitive Environment

Competition is a pillar of capitalism in that it may stimulate innovation, encourage efficiency, or drive down prices (Danso, 2014). According to Danso (2014), competitors are organizations that offer the same, similar, or substitutable products or services in the business area in which a particular company operates. It has become important for the survival of the company to remain ahead of the competitors and predators by differentiating themselves. Creating and sustaining competitive advantage is one way of achieving this goal (Warraich et al., 2013). The business sustainability and success lie in their ability to possess some advantage relative to their competitors. Competitive advantage is the condition which enables a company to operate in a more efficient or otherwise higher-quality manner than the companies it competes with, and which results in benefits accruing to that company (Danso, 2014). According to Pillai (2006), there are five competitive forces that determine the long run profit potential of any industry and its participants: the threat of new entrants, the threat of substitute products, the bargaining power of suppliers, the bargaining power of buyers, and the intensity of rivalry among the core competitors. Result from competitive advantage either by applying a value creating strategy not being implemented by the competitors or through superiorly executing the same strategy as competitors to ensure the business sustainability. Even if businesses have achieved the competitive advantage and gained higher profitability, competitors are quick to imitate their strategies or even enhance their initiatives, thus resulting in loss of competitive advantage (Danso, 2014).

3. Analyses

3.1 Challenges

Among the biggest challenge TC is facing is the competition between suppliers of telecommunication networks such as TIME, and Maxis. From MCMC 2014 performance report, TC recorded a favorable market performance, with gain in market capitalization by 28.9% to RM25.59 billion in 2014 (2013: RM19.85 billion) while TIME dotCom (TIME) registered the highest increase in market capitalization by 37.9% to RM2.8 billion in 2014 from RM2.03 billion in 2013. Table 1 shows the Communications and Multimedia industry market capitalization for year 2012 – 2014.

Table 1. Communications and Multimedia industry market capitalization for year 2012 – 2014 (MCMC, 2015)
Another challenge faced by TC is customer satisfaction with the quality of service provided. Customer satisfaction is quite severe in recent years. TC needs to expand the services towards not only responding to solve consumer complaints but also establishing proactive indicators to improve customer relationships and service experience. TC needs to improve the customer touch point communications to manage customer complaints and expectations. Incorporating these measures as part of business transformation initiative or business strategy will differentiate their services in order to reduce churn and increase market share.

Bandwidth coverage is also one of the challenges to the TC. However, this coverage issue is also faced by all other network providers in Malaysia, due to the hilly topography. Besides that, the legacy of copper infrastructure is one of the main challenges during the adoption of new high speed broadband technology. Legacy copper cable has a lot of operational issues such as bad jointing or aging factor. Furthermore, this copper cable condition become worst if the coverage areas have a problem with copper theft. Due to these issues, some existing TC customers are unable to be upgraded to higher speed broadband. However, with support from the Government through the National Broadband Initiatives, TC has started to replace the infrastructure landscape to ‘fiber to the cabinet (FTTC)’ in order to support HSBB. This landscape will replace the copper cable from the central office and place the equipment in the street cabinet. Currently in Malaysia, ‘fiber to the home (FTTH)’ is only applicable in the urban areas. However, through HSBB2 and SUBB project which is from 2015 until 2020, TC has started to expand its coverage to the identified sub-urban areas in Malaysia.

The analysis reveals that Malaysia’s telecommunication infrastructure to support HSBB is quite poor when compared to other developed countries. In the rural areas, 20 million people still lack access to the basic information and communication infrastructure. To reach HSBB at these areas would be disproportionately expensive and requires much higher investment from the government. In addition, the lack in technology advancement is also one of the factors; existing infrastructure sometimes is not compatible with the new advanced upgrades.

### 3.2 Competitive Advantage

Company strategies should consider one, two or all three categories of competitive advantage for the company to be in the frontline and sustain in the business. Comparison has been made between TC and TIME Dotcom Berhad (TIME) in terms of the competitive advantage. It is found that TC has better advantage compared to TIME in terms of its differentiation in services provided. There are three major differentiation strategies adopted by TC, which are technology availability, variety of products and coverage locations. Table 2 shows the summary of the differences between TC and TIME.

<table>
<thead>
<tr>
<th>DIFFERENTIATION STRATEGIES</th>
<th>TELECOMMUNICATION COMPANY</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology</td>
<td>Fibre, copper, mobile &amp; wireless</td>
<td>Fibre &amp; copper</td>
</tr>
<tr>
<td>Variety of products</td>
<td>516kbps, 1 Mbps, 2Mbps, 4Mbps,8 Mbps, 20Mbps, 30 Mbps, 100 Mbps</td>
<td>100 Mbps, 300 Mbps, 500 Mbps</td>
</tr>
<tr>
<td>Coverage location</td>
<td>Urban, sub-urban &amp; rural areas</td>
<td>Urban area only</td>
</tr>
</tbody>
</table>

From the technology perspective, TC has converged from fixed network technology to wireless technology since 2015, while TIME only has fixed technology to offer. TC comes to be Malaysia’s Convergence Champion, number one Converged Communication Service Provider and number one telecommunication company in Malaysia.

### 3.3 SWOT Analysis

A SWOT analysis has been carried out to identify the strengths, weaknesses, opportunities, and threats of TC. This analysis is important for every division in TC in order to support company’s vision and mission for its continuous business improvement. Table 3 shows the SWOT analysis for TC operation management division.
Table 3. SWOT analysis for TC Operation Division

<table>
<thead>
<tr>
<th>STRENGTH</th>
<th>WEAKNESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Speed Broadband Service helping to serve its customers</td>
<td>Global penetration and brand visibility is limited as compared to leading telecom global giants</td>
</tr>
<tr>
<td>Wide coverage</td>
<td>High complains – service</td>
</tr>
<tr>
<td>Strong service portfolio across its markets</td>
<td></td>
</tr>
<tr>
<td>Strong workforce of over 30,000</td>
<td></td>
</tr>
<tr>
<td>Strong financial leverage</td>
<td></td>
</tr>
<tr>
<td>Strong brand name</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>OPPORTUNITIES</td>
<td>THREATS</td>
</tr>
<tr>
<td>New Services to attract new customers</td>
<td>Regulatory changes causing constant impact on operations</td>
</tr>
<tr>
<td>Strategic Agreements to help grow in new markets</td>
<td>Competitive pressure leading to pricing crunch</td>
</tr>
<tr>
<td>Growth in telecommunications services which is predicted to help revenue growth</td>
<td>Technological changes</td>
</tr>
<tr>
<td>New technology &amp; Innovation</td>
<td></td>
</tr>
</tbody>
</table>

Based on these analyses, the management teams will be able to make critical decisions with regards to their operations management activities. TC has much strength such as a strong foundation in the telecommunication industry and strong brand name.

4.0 Conclusions

The telecommunication company must continuously monitor and evaluate its challenges and SWOT. This could be achieved by identifying the detail changes in the current telecommunication marker, even those subtle ones. For instance, if a company’s product is receiving small patronage, then perhaps it's time to introduce or vary the product based on customer needs and satisfaction. These will provide critical inputs in designing the company’s competitive advantage strategies. Critical decisions for TC include those related to fast changing telecommunication technology, and consumer needs. Thus, it is essential that for Telecommunication company (TC) to remain competitive in the telecommunication market it must continually re-define and re-invent the company’s strategies. Differentiation strategy would be best for TC to adopt.

Acknowledgements

The authors would like to thank Universiti Technologi Malaysia (Vot: Q.K130000.3040.00M95) for the opportunity to fund the publication of this paper.

References


© IEOM Society International
Biography

Nabihah Hashim obtained her degree in Material Engineering and M.Sc (Material Engineering) from Universiti Sains Malaysia in 2002 and 2003 respectively. She currently pursuing his Eng. Doc. in Engineering Business Management with the Malaysian Technological University (Universiti Teknologi Malaysia). She started her career as a lecturer at Universiti Tun Hussein Onn Malaysia (formerly known as KUiTTHO) from 2003 until 2006. In 2007 she joined TC Research & Development Sdn. Bhd. and currently she is a senior researcher under Communication Technologies Division. She is one of the subject matter experts in research for loop diagnostic, VDSL2, Vectoring and G.Fast technologies focusing on physical layer and copper cable deployment in TC network. She also has experience in conductive soil treatment material for earthing applications.

Umeesh Kumar is a Systems Completions and Commissioning Manager working in the UZ-750 Project with the Zakum Development Company (ZADCO) Joint Venture (ADNOC, ExxonMobil and INPEX/JODCO) based in Abu Dhabi. He earned B.Eng. in Mechanical Engineering (Marine Technology) from the Malaysian Technological University (Universiti Teknologi Malaysia), Masters in Business Administration (Oil and Gas) from Middlesex University, United Kingdom and currently pursuing his Eng. Doc. in Engineering Business Management with the Malaysian Technological University (Universiti Teknologi Malaysia). He has various projects management background in both onshore and offshore expertise in greenfield and brownfield developments. He has worked with major oil and gas development organizations such as Saipem, Petrofac and mainly with ExxonMobil Development Company as a Consultant. His research interest includes Oil and Gas Project Management – Construction and Commissioning, Systems Completions, and Projects Optimisation. He is a member of IEM, BEM, CMI and IMechE.

Suriya Narhayhanen is currently Head of Operation for Gombak Unit Operations with Indah Water Konsortium Sdn. Bhd. He earned B.Eng. in Chemical Engineering from the Universiti Teknologi Malaysia, Masters in Environmental Science on water management from Universiti Putra Malaysia, Serdang, and currently pursuing his Eng. Doc. in Engineering Business Management with the Universiti Teknologi Malaysia. He has worked for Indah Water Konsortium Sdn. Bhd. for 20 years and had served various positions and responsibilities from Planning Engineer, Process Audits, Treatment Manager and Senior Treatment Manager before become Head Of Operations. His works responsibilities inclusive professional and administrative work in directing the operations of the wastewater collection systems, municipal wastewater treatment and disposal systems, bio-solids treatment and disposal, maintenance support and inventory management for the Underground Utilities. He has vast experience in small, medium and large scale waste water treatment plant’s operations and maintenance. His research interest includes waste water process improvement and optimization of wastewater operations management. He is a member of BEM and MWA.

Fazarizul Hashidi Muhamad Pauzi has more than 13 years’ experience in construction and telecommunication industries involved in the civil, mechanical and electrical engineering. Started his career as a Project Engineer for a local company in construction industries, he is highly involved in various civil engineering projects such as road rehabilitations and surfacing as well as infrastructure projects. After a few years, he switched to telecommunications industry where he worked with a number of large firms such as LeBlanc, Sapura Secured Technologies and Celcom Axiata. With a strong sense in technical and business development in telecommunication industry, he has been highly involved with most of key project in the industries includes Maxis 3G implementation, Celcom NSN microwave 3G, tower implementation for Ericsson in Indonesia, Government Integrated Radio Network (GIRN) and Telekom Malaysia (TM) High Speed Broadband. He is a pioneer’s team members for Puncak Semangat LTE (now known as Altel Communications) and Digital Terrestrial TV Broadcasting; DTTB (now known as MyTV Broadcasting). Currently he is Assistant Vice President – Technology Services for Prasarana Malaysia Berhad. He holds the Degree in Civil Engineering and Master Business Administration (MBA) in University of Technology
Malaysia and currently pursuing his Engineering Doctorate (Engineering Business Management) from the same university.

**Dr. Habibah @ Norehan Haron** is currently a senior lecturer and Master Project Chairman at UTM Razak School of Engineering and Advanced Technology, Universiti Teknologi Malaysia, Kuala Lumpur. Graduated with BEng (Hons.) in Manufacturing Engineering (UK) and MSc in Manufacturing Systems Engineering (UK), she is a pioneer holder of PhD. in Engineering Education in Malaysia. She is actively involved in Engineering Education, Engineering Business Management and Occupational Safety and Health research areas. She is also passionate about the environmental issues and contributing back to the society. She is presently a committee member of The Institution of Engineers Malaysia - Women Engineers Section, and founding members of several NGOs, including Mercy Malaysia and Khalifah Model School. She is the founder of Fun Learning Toy Library and STEAM Learning Lab. She is a member of professional societies like IEM, SEEM, mSET, and registered with BEM.