# Business Strategies in a Turbulent Business Environment: Findings from Indonesian Telecommunication Industry

# *Strategi Bisnis dalam Lingkungan Bisnis yang Bergejolak: Temuan dari Industri Telekomunikasi Indonesia*

Muhammad Imam Nashiruddin

Center for Regulation & Management of Telecommunication (CRMT)
School of Electrical Engineering, Telkom University
Jl. Telekomunikasi No. 1 Terusan Buah Batu, Bandung 40257, Indonesia

imamnashir@telkomuniversity.ac.id

**Abstract** – This study aimed to explore the development of business strategies in a turbulent business environment. The study involved leaders of several telecommunication business units in Indonesia as research respondents. The research used the descriptive and the explanatory survey method using Partial Least Square-Path Modeling (PLS-PM). The results showed that although the business strategies of the telecommunication companies in Indonesia were included in the good category; however, they were still not optimal because were mostly created through competitive strategy. Whereas, the cooperative strategy turned out to have a more dominant contribution to create superior competitive advantage in a turbulent business environment. The study also discussed problem solving on how the companies should formulate the business strategy in a turbulent business environment and recommended on how to maintain the sustainability of the telecommunication industries in Indonesia.

**Keywords:** business strategy, strategic management, telecommunication industries, telecommunication management, turbulent business environment

***Abstrak*** *– Tujuan penelitian ini adalah untuk mengeksplorasi pengembangan strategi bisnis dalam lingkungan bisnis yang sedang bergejolak. Studi ini melibatkan berbagai pemimpin unit bisnis penyelenggara telekomunikasi di Indonesia sebagai responden penelitian. Penelitian ini menggunakan metode descriptive dan explanatory survey dengan Partial Least Square-Path Modeling (PLS-PM). Hasil penelitian menunjukkan bahwa meskipun strategi bisnis perusahaan telekomunikasi di Indonesia termasuk dalam kategori baik, namun masih belum optimal, karena hal itu lebih banyak diciptakan melalui strategi bersaing. Padahal, strategi kemitraan ternyata memiliki kontribusi yang lebih dominan untuk membangun strategi bisnis yang unggul dalam lingkungan bisnis yang bergejolak. Studi ini juga membahas pemecahan masalah tentang bagaimana perusahaan seharusnya membuat strategi bisnis di lingkungan bisnis yang bergolak dan memberikan rekomendasi untuk menjaga keberlanjutan industri telekomunikasi di Indonesia.*

***Kata Kunci:*** *industri telekomunikasi, manajemen strategis, manajemen telekomunikasi, strategi bisnis, turbulensi lingkungan bisnis*

## INTRODUCTION

The current business environment is marked with increased competition intensity and rapid changes to market and customers' expectations, even faster than previous times. The rapid technology development, the changing preference of customers, emergence of new products with short product cycles and the hyper-competition have increased speed in changes and uncertainties as well as more unpredictable and challenging future by causing turbulence of the business environment (Nashiruddin, 2018).

The turbulent environment may erode the competitive advantage of a company and may cause a competitive advantage become more challenging to maintain.

One of the industries which are widely known to be experiencing turbulent business environment is the telecommunication industry (Kartajaya, Yuswohadi, & Madyani, 2004), marked with rapid and intermittent changes in the areas of (i) technology, (ii) demand/market, (iii) competition, and (iv) regulation. Based on the research by Nashiruddin (2018), the telecommunication industry in Indonesia is experiencing a highly turbulent business environment.

To sustain the competitive advantage in a turbulent environment, a company's business unit needs to possess a superior business strategy. The

organizational performance will be optimal if there is an alignment between the organization and the organizational environment, so it does not have a strategic gap (Ansoff & McDonnel, 1990).

Therefore, this research motivation is to explore how telecommunication company developing their business strategy and avoid the strategic gap to resulting superior business performance in Indonesia telecommunication industry. The strategic gap can be prevented if the formulation of the strategy is related to the environmental conditions in which organization carry out its activities. Many scholars have researched how the company should develop their business strategy, but it is still very limited research in turbulence business environment, such as telecommunication industry, especially in Indonesia. Thus, the research result and their recommendations to resolve the practical problem can be the state of the art of this research.

Following the Law of the Republic of Indonesia Number 36 of 1999, telecommunication services in Indonesia is provided by (i) network provider, consists of fixed network provider (local circuit-switch and packet-switch, long-distance, international, and closed network) and mobile network provider (mobile cellular, mobile satellite, and mobile terrestrial), also (ii) service provider, such as basic telephone service (voice), value-added services (premium call, call center, calling card, and content service) and multimedia services (internet access, network access point or gateway, voice over internet protocol, and data communication system).

Various business units of telecommunications providers in Indonesia have strived to formulate various business strategies to achieve superior performance. Research by (Gitoadi, 2010), for example, shows a variety of business strategies formulated by cellular operators in Indonesia. The business strategy formulated by Telkomsel is differentiation strategy in the form of the broadest range (coverage driven) to various regions throughout Indonesia to get new customers and target premium customers. XL uses the overall cost leadership strategy with the implementation of price innovation, and Indosat applies a focus strategy because each product is always focused on its respective target markets such as Mentari for the family market and IM3 for the youth market (Gitoadi, 2010).

Today Indonesia mobile telecom industry growth rate turned negative throughout year 2018. Telkomsel,

the market leader, reported negative YoY growth for the first time in the recent past in 1Q18. Voice and SMS revenues should continue to decline over time. Indonesian data yields also recorded steep declines, with revenue per MB dropping ~21% q-o-q on average over 1Q/2Q18, driven by intense competition in the industry (Mittal, 2018) as shown in Figure 1.

Currently, Indonesia telecommunication industry also facing problems where data traffic including OTT dominates the telecommunications services which lead to revenue declining while the cost of network maintenance tends to increase (Arif, Perdana, Hasan, & Nashiruddin, 2018). Nevertheless, Indonesian telecommunications companies are accelerating their expansion plans, with ex-Java as the critical focal point. Indonesia has one of the cheapest data pricing in the region and is a significant reason for Indonesian operators to increase capital expenditure (CAPEX) and upgrade network capacity (Mittal, 2018).
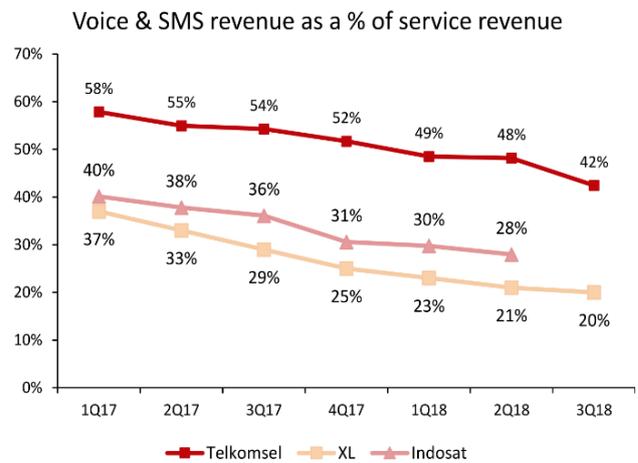


**Figure 1** Mobile Voice and SMS Service Revenue Growth
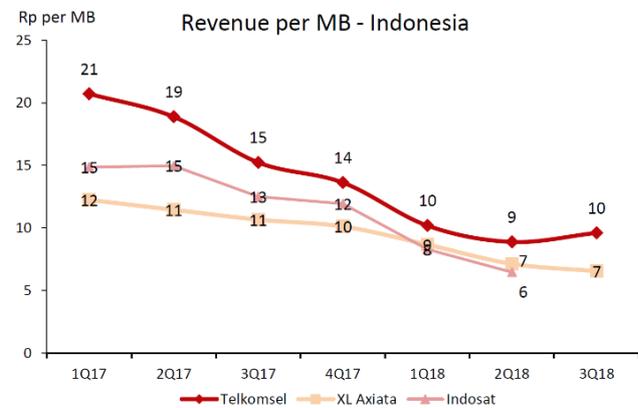


**Figure 2** Mobile Data Service Revenue Growth

The phenomenon in the telecommunications industry in Indonesia above shows the importance of business strategies in order to create a competitive advantage and achieve superior performance. The

company's failure to implement the right business strategy will result in the company being stuck in the middle so that it will get low profitability (Porter, 1980).

Business strategies are policies and guidelines determine how a company competes in industry and ways explicitly to form competitive advantage (Grant, 1991). Business strategies have a critical role in helping the success of a company.

The needs and desires of consumers in consuming a product that tends to change from time to time due to changes in the environment, make a business strategy that has been set by the company need to be reviewed periodically, in line with environmental changes (Wheelen, Hunger, Hoffman, & Bamford, 2018).

Hubbard & Beamish (2011) describes business strategy as a link that links between environmental demands (including customer needs), organizational capabilities, and desires of key stakeholders. An effective business strategy must fulfill all the interests of all three.

According to Pearce & Robinson (2009), business strategy define as an analysis and strategic choice form the phase of a strategic management process where company managers examine and choose a business strategy that enables a company's business to maintain or create a sustainable competitive advantage, evaluate and determine the competitive advantage that provides the basis to distinguish companies from other alternatives that make sense in the minds of customers. Businesses with the dominant line of products or services must also choose between the main strategic alternatives to direct the company's activities.

Wheelen et al. (2018) define business strategy is a decision to focus on the competitive position of the company's products/services in the industry or specific market segments that the company serves. If the corporate strategy provides direction in developing, stabilizing, and shrinking business owned by the company, the business strategy addresses how companies and business units compete with similar companies in the industry.

From some notions of strategies that have been put forward, it appears that each opinion gives a different emphasis in formulating the understanding of business strategies to provide a broad understanding as a whole. Based on the diversity of opinions and adapted to the characteristics of the telecommunication delivery industry in Indonesia, the business strategy in this study is defined as "a strategy formulated by business units in

creating competitive advantage to produce superior performance to win competition within an industry."

Business strategy is still an exciting research topic, and many researchers explore more of its strategic management as there are still many different concepts about business strategy and how to measure it. This paper aims to understand how the company formulating business strategy in the turbulent business environment, i.e., telecommunication industry. The contributions of our work and its results can be developed into a strategic perspective for operators and government/regulator on how to develop business strategy in the telecommunications industry.

This paper is structured into five sections. The first section is Introduction, the second is the Research Methodology, Results, and Discussions is presented in section 3, and finally, the conclusion is presented in section 4.

## RESEARCH METHODOLOGY

This research applied a strategic management approach, which is focusing on the Business Strategy. It is a descriptive study that aims to understand how formulating the Business Strategy in the Indonesian telecommunication industry.

The methodology applied in this study was a descriptive survey to obtain a systematic and accurate description of facts and characteristics of the specific subject, and the explanatory survey to examine hypothesis to answer the problems and the study objectives.

### Population and Sample

The study population was all business units which have licenses to operate as Indonesian telecommunication providers, and there were 455 business units identified. The population and samples were drawn using the Slovin's formula as follow:

$$n = N/(1+Ne^2) \dotfill (1)$$

where n is samples, N is population, e = critical value (percentage of tolerance due to sampling error).

Therefore, with population (N) =455 and critical value (e) = 5 percent, the required samples (n) were $455/(1+455 \times (0.05^2)) = 213$ telecommunication providers.

### Data Collection Technique

To obtain primary data and secondary data needed, various data collection techniques are used. First,

interviews with several telecommunications operator leaders, regulators (BRTI) and other stakeholders. Interviews were also conducted to identify and verify the phenomena obtained from observation.

Second, the distribution of questionnaires used as a measurement tool (instrument) to collect primary data from all telecommunications operators in Indonesia. The questionnaire used in this study was developed from the operationalization of variables and contains nine statements with the response in the form of interval scale with answers 1 (very low) to 5 (very high). To find out whether respondents had difficulty in understanding all statements and in answering the questionnaire, a pre-test was first carried out. Pre-test results will be used to revise the questionnaire so that it is expected to minimize unwanted errors. The questionnaire was distributed both offline and online through http://www.freeonlinesurveys.com to accommodate respondents' ease in filling out the research questionnaire and the ease of data processing.

Third, observing directly in the industry to get preliminary information from existing problems and get field findings that are not in the questionnaire to enrich the discussion.

Fourth, documentation is carried out to collect secondary data from various sources, such as financial statement data, regulations, company history, and so on. Search for similar studies is also carried out through the internet, books, journals, research results and other information deemed relevant to the research topics taken, including the results of internal company documentation such as the results of internal consultant research, company strategy, and seminar materials.

**Measuring the Business Strategy**

In general, there are two conventional approaches frequently applied by the researcher to measure Business Strategy. The first approach to measure Business Strategy is the Competitive Strategy (fight against competitors to win the competition), the second approach is Cooperative Strategy (collaborate with one or several companies to strengthen excellence against competitors).

1) Measuring the Competitive Strategy

There are at least five approaches used to formulate competitive strategies, namely Miles & Snow adaptive strategies, Abell's competitive strategies, generic Porter competitive strategies, Pearce & Robinson, and Thomson, Strickland & Gamble.

Miles & Snow's adaptive strategy is based on the success of the organization in using strategies to adapt to uncertain environments. In this approach, there are four types of strategies, namely: prospector, defender, analyzer, and reactor (Miles, Snow, Meyer, & Coleman, 1978).

Abell's competitive strategy suggests that business can be distinguished through two essential aspects, namely the scope of competition and how far the product differentiation is offered. The combination of the two becomes the basis for Abell to find three possible competitive strategies, namely "differentiated," "un-differentiated," and "focused."

Porter's competitive strategy is based on the competitive advantage of an organization that is creating low cost (cost leadership), the ability of the organization to be different from its competitors (differentiation) as well as competitive scope where organizations compete with each other in a broad or narrow market. The combination of these factors forms the basis of Porter's generic competitive strategy, namely: cost leadership, differentiation, and focus (Porter, 1980).

Pearce & Robinson (2009) explain that companies can establish competitive strategies through low-cost strategies, differentiation strategies, speed-based strategies, and market focus strategies. Whereas Thomson, Strickland, and Gamble set competing for strategies into five, namely: (1) overall low-cost strategy, (2) broad market differentiation strategies, (3) best cost strategies, (4) low-cost focus strategies; and (5) strategies to focus differentiation.

By considering the renewal of research, the suitability of the theory used in research as well as the characteristics of the telecommunications industry in Indonesia, the dimensions and indicators used to measure Competitive Strategy in this study are refer to (Pearce & Robinson, 2009; Porter, 1980; Thompson, Strickland, Gamble, & Peteraf, 2016) as shown in Table 1.

2) Measuring the Competitive Strategy

There are at least five approaches used to formulate cooperative strategies, namely those developed by Wheelen & Hunger, Cravens & Piercy, Walker, Hao Ma and Hitt, Ireland, and Hoskinson.

According to Wheelen et al. (2018), partnership strategies can be used to increase competitive advantage in an industry through collaboration with other companies, including (1) collusion, which is an

active collaboration of companies in an industry to reduce output and increase prices to comply with the economic law of supply and demand, (2) a strategic alliance which is a partnership of two or more corporations or business units to achieve significant and mutually beneficial strategic goals.

**Table 1** Measuring the Business Strategy

| Dimensions | Indicators |
|---|---|
| Competitive Strategy | design, produce and market products that are more efficient (Q1) |
| | provide unique and superior values in terms of product quality, special features or differentiation strategy (Q2) |
| | focus on serving specific segments (Q3) |
| | providing superior products and cheaper prices (Q4) |
| | building capabilities and functional activities so that they can respond to customer needs faster than competitors (Q5) |
| Cooperative Strategy | Partnerships with other companies to share resources and capabilities that are complementary (Q6) |
| | Partnership with other companies to counter competitor attacks (Q7) |
| | Partnership with other companies to reduce risk and uncertainty (Q8) |
| | Partnership with other companies to reduce competition in the industry (Q9) |

Cravens & Piercy (2009) argue that partnership strategies occur between suppliers, producers, distributors, and customers, with the aim of (1) gaining access to markets; (2) increase the value of products/services offered; (3) reduce the risk caused by changes in the environment; (4) complementary in the field of expertise; (5) acquiring new knowledge; (6) building sustainable cooperation with critical consumers; and (7) obtain resources not owned by the company.

According to Walker & Madsen (2016), the motivation of a company to cooperate is (1) technology transfer, (2) market access, (3) cost reduction; (4) risk reduction; (5) changes in industrial structure. Ma (2004) argues that a company can gain a competitive advantage through participation in collaborative arrangements by collecting resources with partners to increase strength, forming alliances with others to deal with third parties, joining multiple alliances to gain large space. Although the cooperative strategy has a positive impact, according to Walker & Madsen (2016), this strategy also has weaknesses, namely (1) reducing reduced control over decision making, (2) strategically inflexible, (3) weaker organizational identity, and (4) issues of mistrust.

According to Hitt, Ireland, & Hoskisson (2011) the partnership strategy can be done through (1) cooperation with other companies to share resources and capabilities that are complementary, (2) cooperation with other companies to counter competing attacks, (3) cooperation with other companies to reduce risk and uncertainty, and (4) cooperation with other companies to reduce competition in the industry.

By considering the renewal of research, the suitability of the theory used in research as well as the characteristics of the telecommunications industry in Indonesia, the dimensions and indicators used to measure Cooperative Strategy in this study are referred to Hitt et al. (2011) as shown in Table 1.

**Testing the Validity of the Research Instruments**

Validity testing is used to know to what extent the questionnaire developed can measure what needs to be measured. The test validity is intended to obtain information regarding the degree of precision of the measurement instrument-the questionnaire-to perform its measuring function. A measurement instrument with high validity will be likely to have small error variances. Therefore, the data collected will be more valid.

The study applied construct validity which determines validity by correlating score of each question item with the total score of all study variables. The total score is the total value obtained from addition of all items' score. Correlation between item score and total score should be statistically significant. If the score of all items prepared based on the dimensional concept correlates with the total score, it is concluded that the measuring instrument is valid. The validity of an instrument can be tested using product-moment formula or Pearson's product-moment correlation with formula as follow:

$$r_{xy} = \frac{n\Sigma X_i Y_i - (\Sigma X_i)(\Sigma Y_i)}{\sqrt{\left[n\Sigma X_i^2 - (\Sigma X_i)^2\right]\left[n\Sigma Y_i^2 - (\Sigma Y_i)^2\right]}} \quad \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

Where $r_{xy}$ is product-moment correlation coefficient or Pearson correlation among items in the instrument with total items used, X is the score of each item in an instrument to be used, Y is the total score of items in the instrument for variable specified, n is the number of respondents involved in instrument trial.

Test of the significance of the correlation coefficient is performed using the following r-count ($t_{hit}$) formula:

$$t_{hit} = \frac{r_{xy}\sqrt{(n-2)}}{\sqrt{(1-r_{xy}^2)}} \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (3)$$

Criteria for testing research instrument validity was conducted using significance level at α = 5 % and degree of freedom (n-2) as shown in the formula below:

    a.  Question items in the instrument are valid if r-count ≥ r-table

    b.  Question items in the instrument are not valid if r-count < r-table

Table 2 shows the results of test validity of data collected from questionnaires.

**Table 2** Validity Test Result of the Research Instruments

| Sub-Variable | Questions Items | r-$_{count}$ (t-$_{hit}$) | r-$_{table}$ | Remark |
|---|---|---|---|---|
| Competitive Strategy | Q1 | 0.682 | 0.138 | Valid |
| | Q2 | 0.652 | 0.138 | Valid |
| | Q3 | 0.422 | 0.138 | Valid |
| | Q4 | 0.688 | 0.138 | Valid |
| | Q5 | 0.663 | 0.138 | Valid |
| Cooperative Strategy | Q6 | 0.755 | 0.138 | Valid |
| | Q7 | 0.707 | 0.138 | Valid |
| | Q8 | 0.755 | 0.138 | Valid |
| | Q9 | 0.706 | 0.138 | Valid |

Based on the results of test validity, it is revealed that there is significant correlation value shown by r-table or correlation coefficient, which is higher than 0.138. Therefore, question items in the questionnaire as an instrument of this study are valid to measure each variable.

**Testing the Reliability of the Research Instruments**

Reliability testing is conducted to obtain information as to what extent the measurement instrument shows its precision, accuracy, stability, or consistency, although measurement is conducted at different times. Reliability testing is performed to valid questions only to know to what extent the results of measurements are consistent if it is conducted using the split-half technique with the following steps:

1. Split questions into two parts.
2. Add the score for each question on each part to develop two total scores for each respondent.
3. Correlate total score on the first split with the total score on the second split using product-moment correlation.
4. Seek for the reliability of all questions using Spearman-Brown formula as follow :

$$r_{tot} = \frac{2\,(r_{tt})}{1 + r_{tt}} \quad \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (4)$$

Where $r_{tot}$ is internal reliability of all items, $r_{tt}$ is the product-moment correlation between the odd part and even part. The decision on test reliability depends on criteria being used if the internal coefficient of all items ($r_{tot}$) is higher than r-table then instrument items are reliable.

Results of tests on data from questionnaires demonstrate that the reliability index for the Business Strategy variable was 0.848, so significant correlation value was obtained by the reliability score that was greater than critical value of 0.7. Therefore, question items in the questionnaire as an instrument in this research were able to provide a reliable measurement for each measurement variable.

**Descriptive Analysis Design**

Descriptive analysis is used to describe each variable in the study, so information regarding perception/understanding of unit business leader of telecommunication provider while formulating Business Strategy can be collected.

In order to conduct a descriptive analysis of each research variable, the following steps were taken:

1) Each variable indicator that is assessed by a respondent will be classified into five alternative answers with an interval scale describing the level of answer. Levels of the answer of each indicator have ranged between 1-5 with different level of meaning as outlined in Table 3.

2) The total score of each variable counted = total score of all variable indicators for all respondents.

3) The score of each variable counted = average of the total score.

4) To determine intervals in 5 levels, then the interval range is generated as follow:

$$\text{Interval Range} = \frac{\text{Max Score} - \text{Min Score}}{\text{Number of intervals}} \quad \dots\dots\dots (5)$$

5) Using the interval range, then the class interval is defined from the lowest up to the highest as displayed in Table 3.

**Table 3** Levels of the Answer and Meaning

| Answer | Competitive Strategy | Cooperative Strategy |
|---|---|---|
| 1 | Very Low Priority | Very Low Priority |
| 2 | Low Priority | Low Priority |
| 3 | Medium Priority | Medium Priority |
| 4 | High Priority | High Priority |
| 5 | Very High Priority | Very High Priority |

6) Based on the above techniques, then the score of all variables of the research are shown as score

category of Business Strategy as displayed in Table 4.

**Table 4** Business Strategy Score & Category

| Dimensions | Score | Predicate |
|---|---|---|
| Competitive Strategy | 1.00 – 1.80 | Very Bad |
| | 1.81 – 2.60 | Bad |
| | 2.61 – 3.40 | In Between |
| Cooperative Strategy | 3.41 – 4.20 | Good |
| | 4.21 – 5.00 | Very Good |

### Descriptive Analysis Design

The study applied quantitative analysis using Structural Equation Model (SEM) with variance or component-based in which Partial Least Square (PLS) was used to design measurement model (outer model) defining correlation between the indicator and its latent variable. For the latent variable of Business Strategy, the indicator is reflective, that means the indicator is influenced by latent construct or indicator that reflects/represents latent construct.

### RESULT AND DISCUSSION

### Respondents' Profile

The research required the respondent be at managerial level and who has been working at telecommunication network or service provider for several years. The respondents' profile is as shown in Table 5.

**Table 5** Profile of Respondent

| Respondents' Profile | Samples (n) | Percentage (%) |
|---|---|---|
| **Types of Telecommunications Provider:** | | |
| Network Provider | 55 | 25.82 % |
| Service Provider | 158 | 74.18 % |
| **Size of Company:** | | |
| Big size company (Asset is above IDR 10 billion) | 141 | 66.20 % |
| Medium size company (Asset is between IDR 500 million – IDR 10 billion) | 57 | 23.94 % |
| Small size company (Asset is less than IDR500 million) | 15 | 7.04 % |
| **Position:** | | |
| Manager | 92 | 43.19 % |
| General Manager | 60 | 28.17 % |
| Director | 61 | 28.64 % |
| **Managerial Experience:** | | |
| Less than 1 Year | 13 | 6.10 % |
| 1 – 3 Years | 33 | 15.49 % |
| More than 3 Years | 167 | 78.40 % |

### Descriptive Analysis of the Business Strategy

Business Strategy developed by the telecommunication provider business units in Indonesia in this study was measured through 2 dimensions, namely Competitive Strategy and Cooperative Strategy. The following section describes the descriptive analysis of each dimension.

### 1. Competitive Strategy

The dimension of Competitive Strategy measures the priority of telecommunication operators in Indonesia in formulating Competitive Strategy to win the industry competition. The results of the score calculation for each indicator in the Competitive Strategy dimension are shown in Table 6 below.

**Table 6** Descriptive Analysis of Competitive Strategy

| | Very High | | High | | Middle | | Low | | Very Low | | Mean | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | f | (%) | f | (%) | f | (%) | f | (%) | f | (%) | | |
| Q1 | 0 | 0.0% | 6 | 2.8% | 52 | 24.4% | 95 | 44.6% | 60 | 28.2% | 3.98 | 0.80 |
| Q2 | 0 | 0.0% | 3 | 1.4% | 39 | 18.3% | 100 | 46.9% | 71 | 33.3% | 4.12 | 0.75 |
| Q3 | 1 | 0.5% | 5 | 2.3% | 57 | 26.8% | 108 | 50.7% | 42 | 19.7% | 3.87 | 0.77 |
| Q4 | 0 | 0.0% | 10 | 4.7% | 62 | 29.1% | 90 | 42.3% | 51 | 23.9% | 3.85 | 0.84 |
| Q5 | 0 | 0.0% | 4 | 1.9% | 40 | 18.8% | 102 | 47.9% | 67 | 31.5% | 4.09 | 0.76 |
| Average | | | | | | | | | | | 3.98 | 0.78 |

Respondent Priority

Based on Table 6 above, it can be interpreted that the Competitive Strategy formulated by telecommunication operators in Indonesia is included in the "good" category, which is contributed mainly by providing unique and superior value in terms of product quality, special features or after-sales services so that buyers want to pay more than competitors.

The least priority indicator of competitive strategies is to provide superior products and at the same time, lower prices. This is thought to be caused by increasingly intense competition, higher telecommunication operating costs and lower levels of profitability so that telecommunications operators are currently in a challenging position to be able to provide superior products and at the same time lower prices.

Therefore, telecommunications operators in Indonesia are trying to find a variety of product/service differentiation and new business areas that provide higher profit margins such as mobile financial services, mobile broadband, Internet TV and so on.

### 2. Cooperative Strategy

The dimensions of the cooperative strategy are used to determine the extent of the telecommunication operator's business units in Indonesia in formulating a strategy with other companies to create competitive advantage and produce superior performance so that they can win the competition. The results of the score calculation for each indicator are shown in Table 7.

**Table 7** Descriptive Analysis of Cooperative Strategy

| | Respondent Priority | | | | | | | | | | Mean | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Very High | | High | | Middle | | Low | | Very Low | | | |
| | f | (%) | f | (%) | f | (%) | f | (%) | f | (%) | | |
| Q6 | 0 | 0.0% | 6 | 2.8% | 62 | 29.1% | 99 | 46.5% | 46 | 21.6% | 3.87 | 0.78 |
| Q7 | 1 | 0.5% | 20 | 9.4% | 69 | 32.4% | 89 | 41.8% | 34 | 16.0% | 3.63 | 0.88 |
| Q8 | 0 | 0.0% | 19 | 8.9% | 69 | 32.4% | 86 | 40.4% | 39 | 18.3% | 3.68 | 0.87 |
| Q9 | 1 | 0.5% | 31 | 14.6% | 77 | 36.2% | 75 | 35.2% | 29 | 13.6% | 3.47 | 0.92 |
| | | | | | Average | | | | | | 3.66 | 0.86 |

Based on Table 7 above, it can be interpreted that the Cooperative Strategy formulated by telecommunication operators in Indonesia is included in the "good" category, which is contributed mainly by partnerships with other companies to share resources and capabilities that are complementary.

Increased operating costs, tight industrial competition and the beginning of the saturation of existing markets and declining profitability have encouraged telecommunications operators to implement cooperative strategies with other telecommunications operators, suppliers, distribution partners, and various other parties. Some of examples are cellular tower rentals to new players, cooperation in the use of infrastructures such as Wifi sharing, Radio Network Sharing, and network operations partnership between XL and Huawei.

The objectives include reducing operational costs, gaining access to new markets, increasing the value of products/services offered, reducing risks or sharing risks, complementing each other in the field of expertise and obtaining resources not owned by the company.

**Hypothesis Testing**

For hypothesis testing, an average test of one sample was performed to determine whether the Business Strategy of the Indonesian telecommunication industry was included in a good or not good category. Based on Table 4, the score of 3.41 in the minimal score for Good Category.

The hypothesis proposed in the average test of one sample is as follow:

*$H_0$: $\mu_0$ < 3.41 Business Strategy is not in a good category*

*$H_1$: $\mu_1$ ≥ 3.41 Business Strategy is in a good category*

From the calculation using the MS Excel program, it is known that the value of x (mean) for Business

Strategy was 3,82. With μ value of 3.41 (cut-off), Deviation Standard (σ) value of 0.56 and total samples were 213 respondents, and the t-count was obtained with the following formula:

$$t = \frac{\bar{x} - \mu_0}{\sigma / \sqrt{n}} \quad \text{……………………………} (1)$$

Therefore:

t-count = (3.82-3.41)/(0.56/$\sqrt{213}$) = 10.685

From t-table with a degree of confidence at 95% and degree of freedom (df) = 213, the value obtained from t-table was 1.652. It is referring to criteria if t-count > t-table ($H_0$ rejected) and if t-count < t-table ($H_0$ accepted), according to calculation it is known that t-count (10.685) > t-table (1.652) therefore, $H_0$ rejected ($H_1$ accepted), it means that Business Strategy is significantly in the good category.

Thus, the hypothesis that the telecommunication operator's business units in Indonesia have business strategies which are in the good category is acceptable. The results of this study were reinforced with the research of (Kaltum, 2010) and (Gunawan, 2013) on all cellular telecommunications operators in Indonesia, which shown that the Business Strategy possessed good category.

**Verificative Analysis of the Business Strategy**

Business Strategy variable is measured using two dimensions, namely the dimension of Competitive Strategy (SBER) and Cooperative Strategy (SKEM). Each dimension is measured by several indicators, so measurement model uses the second-order model. Based on the results of data processing using XLSTAT, the measurement model for Business Strategy variables is shown in Table 8 and Figure 3 below.

**Table 8** Verificative Analysis of Business Strategy

| Dimensions | Symbol | $R^2$ Standardized loadings | Variants of Error | t-count | Result |
|---|---|---|---|---|---|
| Competitive Strategy | SBER | 0.853 | 0.727 | 0.273 | 23.7 | Valid |
| Cooperative Strategy | SKEM | 0.864 | 0.746 | 0.254 | 24.8 | Valid |
| Composite Reliability (CR) = 0.891 | | | | | |
| Average Variance Extracted (AVE) = 0.503 | | | | | |
| Cronbach's alpha= 0.858 | | | | | |

From Table 8 above, it can be seen that the two dimensions used to measure the Business Strategy variable have excellent convergent validity levels with standardized values of loading factors higher than 0.50 and AVE above 0.5. Both dimensions are also

concluded to be valid with composite reliability greater than 0.70 and Cronbach's Alpha greater than 0.6. The most potent dimension in reflecting the Business Strategy variable is the Cooperative Strategy dimension, while the weakest is the Competitive Strategy. Furthermore, the results of testing of indicators in each dimension are presented in Table 9 and Table 10.
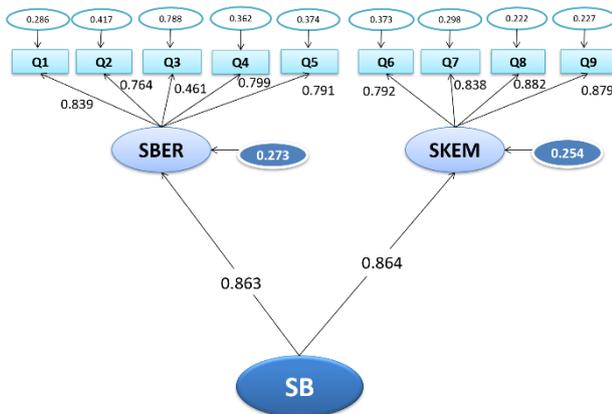


**Figure 3** Measurement Model for Business Strategy

**Table 9** Verificative Analysis of Competitive Strategy

| Indicator | Standardized loadings | $R^2$ | Variants of Error | t-count | Result |
|---|---|---|---|---|---|
| Q1 | 0.839 | 0.714 | 0.286 | 15.494 | Valid |
| Q2 | 0.764 | 0.583 | 0.417 | 14.161 | Valid |
| Q3 | 0.461 | - | 0.788 | - | Not Valid |
| Q4 | 0.799 | 0.638 | 0.362 | 12.788 | Valid |
| Q5 | 0.791 | 0.626 | 0.374 | 15.116 | Valid |
| Composite Reliability (CR) = 0.876 | | | | | |
| Average Variance Extracted (AVE) = 0.638 | | | | | |
| Cronbach's alpha= 0.810 | | | | | |

As presented in Table 9, indicators used to measure Competitive Strategy is valid (except Q3) because it has a value factor of more than 0.5, AVE value greater than 0.50 and a calculated value higher than t-table 1.96. This means that all indicators used are significantly able to reflect the dimensions of Competitive Strategy.

All indicators used are also stated to be reliable because they have Composite Reliability (CR) values above 0.7 and Cronbach's Alpha above 0.6. This shows that the indicators used have a very high degree of conformity in forming the dimension of Competitive Strategy, which is equal to 0.876 on a scale of 0-1.

The AVE value of 0.638 indicates that on average, 63.8% of the information contained in each indicator can be reflected through the Competitive Strategy dimensions. The results of the analysis also found that the most dominant indicators were designing, producing, and marketing more efficient products so that they have lower costs and lower selling prices than competitors (low-cost strategy). This means that changes in Competitive Strategy are more reflected in the changes in these indicators.

**Table 10** Verificative Analysis of Cooperative Strategy

| Indicator | Standardized loadings | $R^2$ | Variants of Error | t-count | Result |
|---|---|---|---|---|---|
| Q6 | 0.792 | 0.627 | 0.373 | 13.151 | Valid |
| Q7 | 0.838 | 0.702 | 0.298 | 14.687 | Valid |
| Q8 | 0.882 | 0.778 | 0.222 | 16.698 | Valid |
| Q9 | 0.879 | 0.773 | 0.227 | 17.936 | Valid |
| Composite Reliability (CR) = 0.913 | | | | | |
| Average Variance Extracted (AVE) = 0.720 | | | | | |
| Cronbach's alpha= 0.870 | | | | | |

As presented in Table 10, all indicators used to measure Cooperative Strategy are declared valid because they have a value factor of more than 0.5, AVE value greater than 0.50 and a calculated value higher than t-table 1.96. This means that all indicators used are significantly able to reflect the dimensions of Cooperative Strategy.

All indicators used are also stated to be reliable because they have Composite Reliability (CR) value greater than 0.7, and Cronbach's Alpha greater than 0.6. This shows that the indicators used have a very high level of conformity in shaping the dimensions of the Cooperative Strategy, which is equal to 0.913 on a scale of 0-1. The AVE value of 0.720 indicates that on average, 72% of the information contained in each indicator can be reflected through the dimensions of Cooperative Strategy.

The results of the analysis also found that the most dominant indicator was the partnership with other companies to reduce risk and uncertainty. This means that changes in the Cooperative Strategies are more reflected in the changes in these indicators.

**Problem Solving Analysis**

Based on the results of the study, it was obtained a mapping of the solution indicators of business strategy problems in a turbulent business environment, as shown in Figure 4 below.

Based on the solution mapping of business strategy problem solutions above, it appears that the business strategies of telecommunications operators in Indonesia are included in the good category but not optimal because there are still gaps between the average value of business strategy indicators that represent the perceptions of current business unit leaders and test results the perception indicator uses the Partial Least Square (PLS) measurement model.
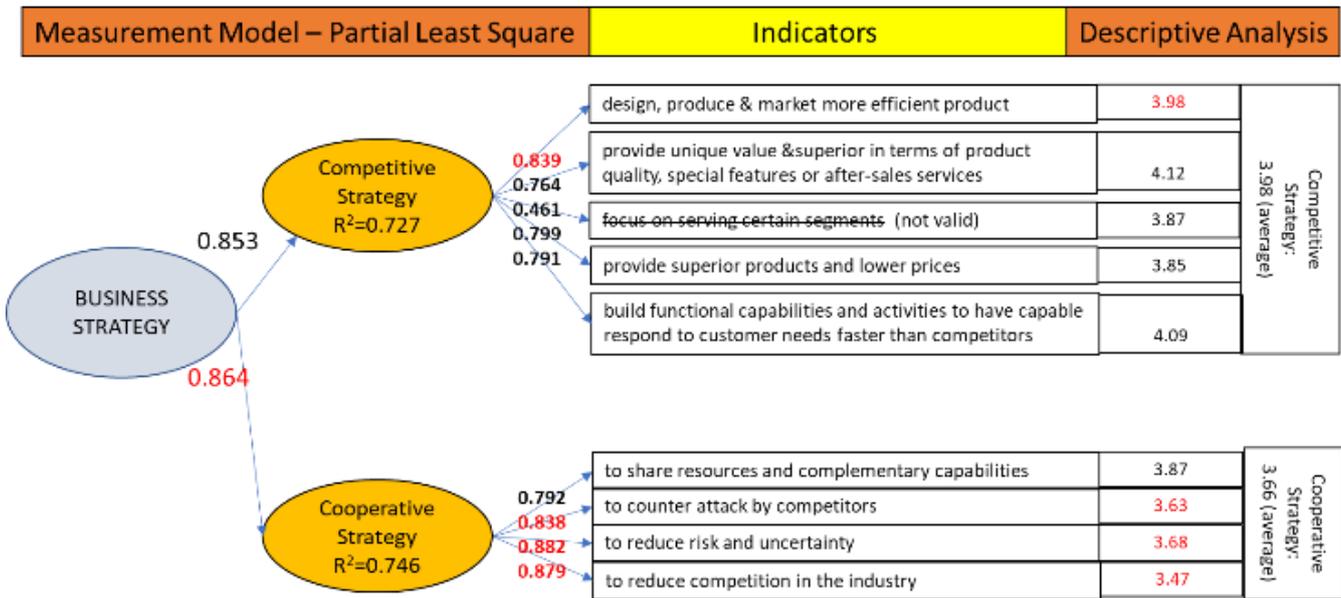
**Figure 4** Measurement Model for Business Strategy

Judging from the averages, business unit leaders have the perception that competitive strategies are the strongest dimension reflecting the telecommunications business strategy in Indonesia, but the results of the study show that the cooperative strategy has a higher contribution.

Based on the indicators of business strategy problems presented in Figure 4 above, it can be seen that the business strategies of telecommunications operators in Indonesia can be further optimized, especially by (1) cooperating with other companies to reduce risks and uncertainties; (2) collaborating with other companies to reduce competition in the industry and (3) designing, producing and marketing more efficient products.

As discussed earlier, OTT providers are both OTT Voice, and OTT Messaging threatens the sustainability of telecommunication industry in Indonesia. Alternative strategies that can be developed by operators to deal with OTT providers are (1) protect, by reducing the negative impact of OTT services on network capacity and operator income; (2) facilitating, by maximizing the utilization of network and infrastructure assets to be offered to OTT service providers through specific commercial schemes; (3) collaborating, by establishing strategic cooperation by offering OTT services from third parties to operator customers; and (4) compete, telecommunications operators compete directly against OTT service providers by developing their own value-added services.

With high turbulence business environment (Nashiruddin, 2018), telecommunications operators in Indonesia need to minimize risks and uncertainties and reduce competition in the industry through a combination of partnership strategies (cooperation) with both OTT providers and other telecommunications operators to develop OTT-based operators, also known as coopetitive strategy.

To responding to OTT and other IP based services, many telecommunication providers in different countries are adopting multiple business strategy approaches (Seixas, 2015). First is blocking strategy, which network operators discriminate against traffic by competing OTT services. As an example, AT&T blocked mobile VOIP following the release of the iPhone.

Second is fair usage strategy, which some network operators have a 'fair use' policy that imposes data, voice, and messaging usage limits. As an example, Deutsche Telekom attempts to cap data speeds on flat-rate packages over fixed broadband line.

The third approach is pricing strategy, which some network operators have introduced new pricing models, either to limit customers from using OTT services - e.g., by relating prices to use of specific services blocking or throttling of internet content. As an example, Verizon (US) introduced a flat monthly fee for unlimited domestic voice and SMS.

The fourth approach is Own OTT Apps strategy, which operators have developed their own services to compete with OTT services – e.g., Telefónica's 'TU go' or Orange's 'Libon' messaging app. Fifth business

strategy is partnerships, by working with OTT providers – e.g., E-Plus's partnership with WhatsApp in Germany and Hutchison's partnership with Spotify in Austria. The latter approach is the bunding strategy by bundling their own services with other offers. Telecom operators may put OTT providers in a disadvantaged position.

Mobile operators can also enhance coopetitive strategy with OTT service providers to retain traffic on-net, enhance service offerings, and/or generate new revenues (Seixas, 2015). The two most popular content partnerships today are those involving streaming music and video. As an example, 3 (UK) and Verizon (US) partnered with Skype, Ooredoo (Kuwait) partnered with WhatsApp, Vodafone (UK) 4G price plans include a free subscription to either Spotify or Sky Sports Mobile TV.

Telecommunication provider also has potential for negotiating a revenue share arrangement with OTT streaming music service provider creates a potential new revenue stream. It will help with differentiation and maybe churn reduction, also enables quicker penetration for the OTT service provider.

However, there is still a risk that customers may be deterred by the higher data usage and charges that these services involve while some mobile operators are not metering streaming music (Seixas, 2015). As an example, (1) T-Mobile (US) and iHeart Radio, iTunes Radio, Milk Music, Rhapsody, Slacker, and Spotify (all unmetered), (2) Telefonica (South America) and Rhapsody/Napster (equity stake), and (3) AT&T (US) and Beats Music.

In another hand, the challenge currently faced by telecommunications operators to implement cooperative/coopetitive strategies is the absence of a regulatory framework that protects cooperation between operators. On the other hand, there is still sectoral ego which is still high among telecommunications operators, especially large operators (incumbents) who feel that they have a relatively stable position in facing hyper-competition in Indonesia telecommunication industry.

In terms of implications for the theory, this finding reinforces the research of (Kaltum, 2010) and (Gunawan, 2013) of all cellular operators in Indonesia which show that the business strategy they have is included in the good category. This finding is consistent with the opinion of (Porter, 1980, 1985) where explain strategy as an organization's effort to create excellence compete and (Hill, Jones, & Galvin, 2004) that the core of strategy determination is creating a competitive advantage that is a source of superior profit.

## CONCLUSION

The business strategies of the telecommunication companies in Indonesia were included in the good category, but were still not optimal, because were dominantly created through competitive strategy, whereas the cooperative strategy turned out to have a more dominant contribution in formulating a superior business strategy in a turbulent business environment.

To create superior business strategy in turbulent business environment and maintain the sustainability of the telecommunications industry, telecommunications operators in Indonesia need to improve the cooperative strategy, especially by (1) cooperating with other companies to reduce risks and uncertainties; (2) collaborating with other companies to reduce competition in the industry and (3) by designing, producing and marketing more efficient products.

To reduce risks, uncertainties, and competition in the industry, it is also recommended that telecommunication operators in Indonesia need to increase their priority on several ways. First, increase cooperation with other operators or partners through shared use of infrastructure & services, joint operations, joint investments, and others.

Second, assessing the ideal number of operators and encouraging mergers & acquisitions among operators, including among others, urging the government / regulators to limit the large number of operators and implementing a moratorium on new licenses to achieve the ideal composition of the number of operators, and the third is collaborating with other operators to jointly create barriers for the entry of OTT operators who illegally use operator networks to encourage OTT operators to work with telecommunications operators.

This research has limitations, such as does not consider the difference of company size between telecommunication provider and the unit analysis focusing on business unit leaders. Therefore, for further research development, it is recommended to future researchers to continue this study (1) by using control variable such as company size, (2) expand to other high velocity industries or middle/low velocity industry, i.e. public agencies or non-commercial institutions, (3) by develop the unit of analysis on corporate level and functional level.

## REFERENCES

Ansoff, H. I., & McDonnel, E. J. (1990). *Implanting Strategic Management* (Second Edi). Prentice-Hall.

Arif, S. R., Perdana, D., Hasan, T., & Nashiruddin, M. I. (2018). Analysis of Connectivity Model and Encoding Standards on IP Interconnection Implementation in Indonesia (Study Case: Low Data Rate up to 72 Mbps). *Buletin Pos Dan Telekomunikasi*, *16*(1), 55. https://doi.org/10.17933/bpostel.2018.160105

Cravens, D. W., & Piercy, N. F. (2009). *Strategic Marketing* (9th edition). Boston: McGraw-Hill Irwin. Retrieved from http://bvbr.bib-bvb.de:8991/exlibris/aleph/a22_1/apache_media/QBG2DR9M3QLHJTJ9BG1GF3TP67MN66.pdf

Gitoadi, T. (2010). *Strategi dalam Menghadapi Persaingan Industri Telekomunikasi Seluler GSM di Indonesia*. Universitas Bina Nusantara.

Grant, R. M. (1991). The Resource-Based Theory of Competitive Advantage: Implications for Strategy Formulation. *California Management Review*, *33*(3), 114–135. https://doi.org/10.2307/41166664

Gunawan, I. (2013). *Pengaruh Lingkungan Bisnis Dan Reputasi Perusahaan Terhadap Strategi Bisnis Dan Keunggulan Bersaing Serta Implikasinya Pada Kinerja Bisnis Operator Telekomunikasi Seluler Di Indonesia. Disertasi. Fakultas Ekonomi dan Bisnis. Universitas Padjadjaran*. Universitas Padjadjaran.

Hill, C., Jones, G., & Galvin, P. (2004). *Strategic Management: An Integrated Approach. Strategic Management: An Integrated Approach* (11th Edition). Stamford, CT: Cengage Learning. https://doi.org/10.2218/ijdc.v5i1.148

Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2011). *Strategic Management and Strategic Competitiveness. Strategic Management: Competitiveness and Globalization: Concepts*. https://doi.org/10.1017/CBO9781107415324.004

Hubbard, G., & Beamish, P. (2011). *Strategic Management : Thinking, Analysis, Action*.

Kaltum, U. (2010). *Pengaruh Strategi Bisnis dan Total Quality Service terhadap Keunggulan Bersaing dan Implikasinya pada Kinerja Unit Bisnis Industri Telekomunikasi di Indonesia (Suatu Survey di Pulau Jawa). Disertasi Program Pascasarjana Universitas Padjdjaran*. Universitas Padjdjaran.

Kartajaya, H., Yuswohadi, & Madyani, D. (2004). *On Becoming A Customer-Centric Company: Transformasi TELKOM Menjadi Perusahaan Berbasis Pelanggan*. Jakarta: Gramedia Pustaka Utama.

Ma, H. (2004). Toward global competitive advantage: Creation, competition, cooperation, and co-option. *Management Decision*, *42*(7), 907–924. https://doi.org/10.1108/00251740410550961

Miles, R. E., Snow, C. C., Meyer, A. D., & Coleman, H. J. (1978). Organizational Strategy, Structure, and Process. *The Academy of Management Review*, *3*(3 (Jul. 1978)), 546–562.

Mittal, S. (2018). *Industry Outlook : Indonesia Telecom (ID)*. DBS Group Research. *Asian Insight Office*. Singapore.

Nashiruddin, M. I. (2018). Understanding the Turbulence of Business Environment in Telecom Industry : Empirical Evidence from Indonesia. *Buletin Pos Dan Telekomunikasi*, *16*(2), 75–90. https://doi.org/10.17933/bpostel.2018.160201

Nashiruddin, M. I. (2019). Creating Competitive Advantage in the Turbulent Business Environment : Lesson Learned from Indonesia Telecommunication Industry Menciptakan Keunggulan Bersaing dalam Lingkungan Bisnis yang Bergejolak : Pelajaran dari Industri Telekomunikasi Indonesia. *Buletin Pos Dan Telekomunikasi*, *17*(1), 31–46. https://doi.org/10.17933/bpostel/2019/170103

Pearce, J. A., & Robinson, R. B. (2009). *Strategic Management: Formulation, Implementation, and Control*. McGraw-Hill/Irwin.

Porter, M. E. (1980). *Competitive Strategy: Techniques for Analyzing-Industries and Competitors. The Free Pers* (First Edit). New York: The Free Pers.

Porter, M. E. (1985). Competitive Advantage: Creating and Sustaining-Superior Performance. New York: The Free Press.

Seixas, P. (2015). Session 5 : Building Synergies between OTT players and ICT network operators. In *ITU-ASEAN Forum on Over the Top (OTT) Services: Business, Policy and Regulatory Trends* (p. 20). Phnom Penh, Cambodia: International Telecommunication Union (ITU).

Thompson, A. A. J., Strickland, A. J., Gamble, J. E., & Peteraf, M. A. (2016). *Crafting & Executing Strategy: The Quest for Competitive Advantage. McGraw Hill Education*.

Walker, G., & Madsen, T. L. (2016). *Modern Competitive Strategy. McGraw-Hill Education* (4th Editio). McGraw-Hill Education.

Wheelen, T. L., Hunger, J. D., Hoffman, A. N., & Bamford, C. E. (2018). *Strategic Management and Business Policy : Globalization, Innovation and Sustainability* (15th ed.). Pearson.