

# Measuring Performance Using Balance Scorecard and SWOT Analysis: A Case Study of Multinational Electricity Company in Malaysia

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## Abstract

Tenaga Nasional Berhad (TNB) is a Malaysian company that is the main supplier of electricity to 10.6 million consumers in the country. In general, TNB electricity tariff is classified differently based on consumer business activity and the supply voltage level supplied. It can either be low, medium or high voltage depending on whether it is for domestic use, commercial, industrial, mining, street lighting or specific agriculture. Not only is electricity the main means of powering convenient modern living, but it is also the lifeblood of modern industries critical for a thriving business environment in the country. However, due to increasingly high generation costs due to global fuel prices incurred, TNB maintains that they have to consider the decision to increase the electricity tariff. The public and the government understandably are concerned because it will affect many parties, especially the increase in the cost of living of their consumers. To understand TNB's justification for raising its electricity tariff bill, a study needs to be conducted. Therefore, the main objective of the study is to evaluate the financial and non-financial performance of TNB. The TNB's annual reports over the past five years (2018 to 2022) have been analysed using the Balanced Scorecard concept. The results of the study show that TNB's income is increasing every year. However, the amount of debt incurred by TNB has also increased. This was followed by a 45% increase in operating expenses. In those five years, the number of users has increased by almost 10%. The conclusion of the study was presented using a SWOT analysis to provide a more meaningful analysis of TNB's performance. In summary, the company's financial and non-financial position is in good condition, as long as the government continues to provide subsidies to cover part of consumers' electricity bills.

**Keywords:** interview questions, methodology, pilot study, qualitative research

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## INTRODUCTION

Tenaga Nasional Berhad (TNB) is the main supplier of electricity in residential premises, buildings and commercial centres in Peninsular Malaysia, and Sabah and Labuan, in East Malaysia, TNB was established in 1990 as a government-linked company (GLC). As a company with GLC status, TNB company should understand the needs and satisfaction of its customers as per the TNB Code of Ethics under the customer focus (TNB, 2023a). Recently, the issue of increasing electricity bills has received many complaints and people have criticised TNB's action. This is because electricity bills are charged at different rates based on the total consumption of customers regardless of their economic status (Ahmad Mustakim & Azzman, 2023). However, in order to understand TNB's justification for raising its electricity tariff bill, a study needs to be conducted. Therefore the main objective of the study is to find out the performance of the TNB company. If the company's performance is in a good position with billions of ringgit in profits, it should carry out its corporate social responsibility (CSR) i.e. not raise electricity tariffs in the future to reduce the economic burden on consumers. However, if the reasons for the proposed increase in tariff are unavoidable, then TNB is justified in calling for a raise in its electricity tariff bill. This study evaluates the financial and non-financial performance of TNB using the Balanced Scorecard concept.

## BACKGROUND OF STUDY

The issue of rising electricity bills has become a hotly debated issue among consumers (Hazwan, 2023; Ahmad Mustakin & Azzman, 2023, Awani, 2023). The reason for such action is that the government claims to have provided high electricity subsidies amounting to RM10.76 billion for domestic and non-domestic consumers for the period 1 January to 30 June 2023 (Ahmad Mustakim & Azzman, 2023). As a cost-saving measure, the government has withdrawn electricity subsidies for the top 20% high-income groups (T20) and domestic consumers who use excess electricity, i.e. more than 1500 kWh per month. This action received various reactions from users who were mostly dissatisfied (Hazwan, 2023; Ahmad Mustakin & Azzman, 2023, Awani, 2023). Especially in today's digital lifestyle era, various home appliances, entertainment, vehicles, telecommunications, and other household gadgets require an electrical power supply for them to function. These items include electric cars, cookers, refrigerators, vacuum cleaners, televisions, computer devices, watches, exercise equipment, wi-fi, mobile phones, ceiling fans, air conditioners and other appliances. Therefore, the government's monthly subsidy allocation which is subject to a consumption capacity of 1500 kWh for a household for a period of one month is insufficient, if all the electrical equipment is used for daily affairs.

The dependence of approximately 10.6 million consumers on a single source of electricity for various domestic and business activities has caused TNB to dominate this business market in Peninsular Malaysia, Labuan and Sabah (TNB, 2022). Based on TNB's annual report, the largest customers for electricity supply are customers from residential areas which are over 8 million (8,672,533), followed by commercial centers (1,762,473), industry (35,187) and others (105,477) (TNB, 2022). TNB's revenue for the 2022 financial year is RM50 billion. It is a very large amount. However, in order to ensure the true position of TNB's company performance, it needs to be studied from various angles, which is not only focused on finance alone. The Balance Scorecard (BSC) method is used in this study. This is because it has been widely applied in previous studies to evaluate company performance from the aspect of financial and non-financial performance (Nippak, Veracion, Muia, Ikeda-Douglas, & Isaac, 2016; Pham, Vu, Pham, & Vu, 2020; Abdel Raheem & Hussien, 2022; Sukmo Hadi & Elisabethvtanti, 2020; Rishi, et al., 2021).

### Tenaga Nasional Berhad

Tenaga Nasional Berhad was formed by the Electricity Supply Substitute Company Act 1990, to replace the Central Electric Board established in 1949, followed by the National Electricity Board of the States of Malaya (NEB) established in 1965. Since the establishment of TNB which has spanned more than 30 years, the company's business has flourished domestically and internationally. One of TNB's core businesses is power generation led by TNB Power Generation Sdn Bhd, which has thermal generation assets and major hydro schemes in Peninsular Malaysia and overseas businesses such as Maintenance and Operations Operators in Kuwait, Pakistan and Cambodia (TNB, 2023b).

TNB's largest shareholders are Khazanah Nasional Berhad (25.5%), Permodalan Nasional Berhad (18.3%), Employees Provident Fund (15.8%), Retirement Fund (7.3%) and others (1.8%). The remaining 31.3% of the shares are held by other local companies and Malaysian retail and foreign shareholders (TNB, 2022).

Currently, the total number of TNB customers is 10.6 million (TNB, 2022). As a company with GLC status, TNB has carried out various CSR activities for society. In the financial year 2022, TNB has invested a total of RM12.20 million into four areas of community programs namely social (RM4.27 million), environment (RM0.48 million), governance (RM2.27 million), and sports (RM5 18 million) (TNB, 2022). In addition, the company also has an education fund which is the Yayasan Tenaga Nasional scholarship.

TNB's corporate governance excellence has been recognised nationally and internationally. This is proven by the winning of various awards by TNB such as the 2021 ASEAN Corporate Governance Scorecard Award; Enlit Asia Power & Energy Awards 2022; MSWG Industry Excellence Award 2021; and 2022 National Integrity, Governance and Anti-Corruption Awards (TNB, 2022). The Board even received accolades from the World Bank, acknowledging it as a well-run and financially sound entity with an appropriate pricing policy, investment planning and with adequate autonomy. This excellent achievement shows the credibility of the well-managed company. However, in order to evaluate business performance comprehensively in financial and non-financial terms, this study uses the Balance Scorecard concept, where this method has been widely used in past studies.

### Balance Scorecard Research Framework

The Balance Scorecard concept has been widely adopted in previous studies to evaluate the performance of businesses and non-profit organizations. Among the previous studies that have been conducted were: performance evaluations of hospitals in Canada (Nippak, Veracion, Muia, Ikeda-Douglas, & Isaac, 2016), hospitals in Vietnam (Pham, Vu, Pham, & Vu, 2020), universities in Saudi Arabia ( Abdel Raheem & Hussien, 2022), textile factories in Iraq (Abbas Bahia, Ahmed, & Idan, 2020), the banking sector in Turkey (Dincer, Hacıoglu, & Yuksel, 2020),

hotels and restaurants in America (Banker, Potter, & Srinivasan, 2005), top 90 companies in Greece (Cohen, Thiraios, & Kandilorou, 2008), small and medium industries in the manufacturing sector in Semarang, Indonesia (Agus, Maylia, Anindya, Surya, & Nawang, 2021), contractor companies in Indonesia (Sukmo Hadi & Elisabethvtanti, 2020), and insurance companies in India (Rishi, et al., 2021).

The Balance Scorecard concept was developed by Kaplan and Norton (1992; 1996); (Kaplan, 2010) for the purpose of evaluating companies using four performance indicators, namely: financial, customer, learning & growth, and internal business elements. It aims to evaluate the financial and non-financial performance of an organisation to measure whether the goals of the establishment or mission of the organisation have been achieved. This study found that the founding mission of TNB is committed to delivering the best products and services in driving business to meet the expectations of stakeholders that have the characteristics of shared values, customer focus, safety & environmental responsibility, commercial awareness, spirit of excellence, honesty. and integrity. (TNB, 2023c).

In this study, the first variable of the Balance Scorecard is a financial perspective that focuses on three things namely liquidity, solvency and profitability. This item was adapted from a previous study by Sukmo & Elisabeth (2020) which measured the financial performance of PT. Syarikat Kontraktor Tbk for three years which is 2017 to 2019.

The second Balance Scorecard performance evaluation item is a non-financial perspective that is the customer. Customers are an important element in determining the success of a company. The variables of customer-related items are market share (Sukmo & Elisabethvtanti, 2020), number of customers (Abdel Raheem & Hussien, 2022), customer satisfaction index (Banker, Potter, & Srinivasan, 2005), number of complaints received (Banker, Potter, & Srinivasan, 2005; Sukmo Hadi & Elisabethvtanti, 2020) and the number of complaints resolved (Agus, et.al., 2021).

Next, the third Balance Scorecard performance evaluation item is also a non-financial perspective that is the internal element of the organization (internal business process). This perspective focuses on activities that exist in business or the involvement of members in a company in a work chain that gives impact and value (Soffia, 2021). In this study, elements focused are on the corporate reputation index, the number of employees, operating expenses (Banker, Potter, & Srinivasan, 2005), the number of employee deaths and the number of suppliers (Cohen, Thiraios, & Kandilorou, 2008).

Finally, the fourth Balance Scorecard performance evaluation item under a non-financial perspective is learning and growth. This perspective looks at the ability of the company and employees to move forward in line with current technological changes through innovation, creativity and efficiency (Cohen, Thiraios, & Kandilorou, 2008). Performance evaluation items for this study focused on employee engagement barometer scores (Agus, et.al, 2021), employee turnover rates (Agus, et.al., 2021) and training (Abdel Raheem & Hussien, 2022; Agus, et.al, 2021).

A research framework was constructed to show the Balance Scorecard performance evaluation items for this TNB company study as shown in Figure 1. This study's objectives are to find out the performance of the TNB company from financial and non-financial perspectives.

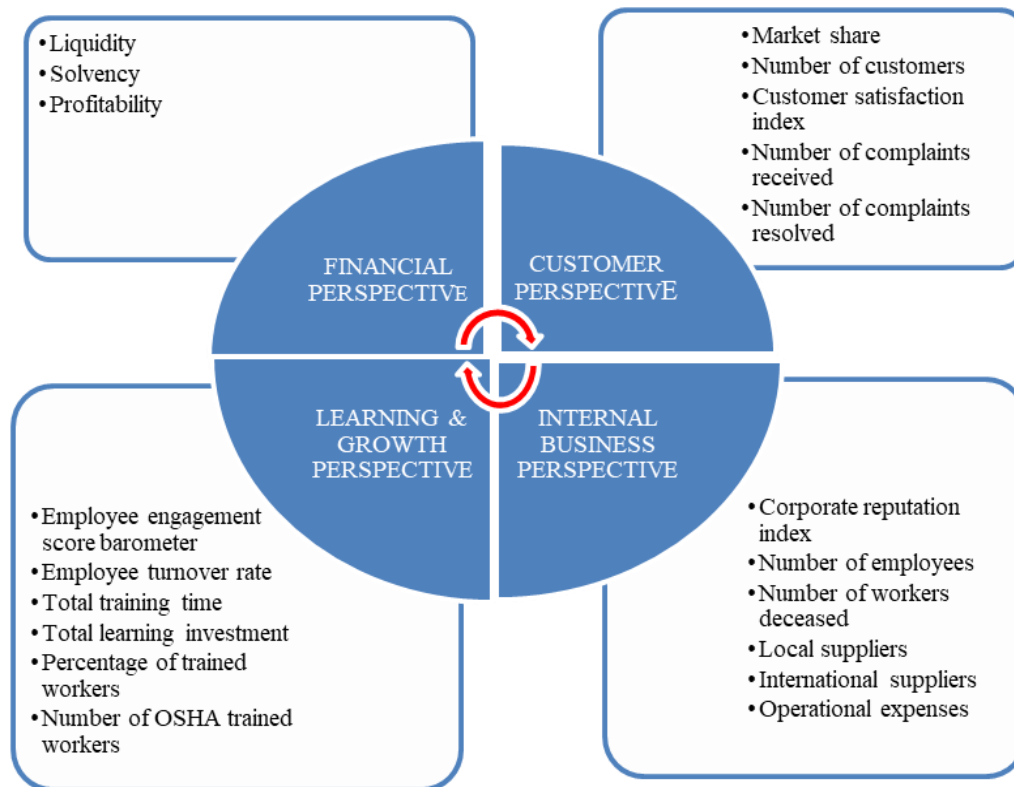


Figure 1. Balance Scorecard of Tenaga Nasional Berhad Company

**Limitation of Balance Scorecard**

Even though the Balance Scorecard method has been widely adopted in previous studies to evaluate the performance of businesses and non-profit organizations. There is a lot of criticism directed at the Balance Scorecard. For example: (i) Balance Scorecard does not highlight human relations in its implementation (Alan , Aaron, & Richard, 2003; Ratnaningrum, Y. Anni, & Doddy, 2020). The Balance Scorecard performance indicators are often highlighted in the interests of shareholders and clients (Rillo, 2004) but fail to consider the interests of other key stakeholders such as employees, community, suppliers and public authorities (Atkinson, Waterhouse, & Wells, 1997; Norreklit, 2000; Alan , Aaron, & Richard, 2003; Neely, Adams, & Kennerley, 2002; Emad & Amir, 2015). Next, (ii) Balance Scorecard does not consider the external environment as part of the performance indicators (Norreklit, 2000; Rillo, 2004; Emad & Amir, 2015; Ratnaningrum, Y. Anni, & Doddy, 2020), the item is important as it may affect organizational strategy planning. Next, (iii) Balance Scorecard results do not have a cross-sectional perspective between indicators (Rillo, 2004; Emad & Amir, 2015). This is because the Balance Scorecard performance indicators have no causal relationship between them (Norreklit, 2000). Furthermore, (iv) Balance Scorecard is seen to need an approach or procedure (Ahn, 2005) to provide a comprehensive explanation of its four performance indicators, namely financial, customer, learning & growth, and internal business elements. Although the Balance Scorecard plays a role in assisting organisations to implement their strategies based on KPIs set up by management, it does not lead much in making new strategic decisions in the future. For example, what are the next actions that need to be taken and areas that need to be focused on to improve performance or which non-financial items need to be improved to have a positive impact on the organisation's financial performance?

In conclusion, to improve the limits of the Balance Scorecard and provide more useful information for managers, other tools need to be integrated or combined with the Balance Scorecard. This research has integrated a balanced scorecard with Strength-Weaknesses-Opportunities and Threats (SWOT) analysis. This approach was found useful in measuring company performance (Quezada, Reinao, Palominos, & Oddershede, 2019). SWOT analysis has been widely used by businesses to make strategic plans (Benzaghta, Elwaida, Mousa, & Rahman, 2021). It is a tool for analyzing a company from an internal and external perspective, in order to generate strategies for the firm (Quezada, Reinao, Palominos, & Oddershede, 2019). According to Lee & Ko (2000) when combining SWOT

analysis with the Balance Scorecard, firms can increase their market opportunities and balance their strengths against the weaknesses of their competitors. The combination of Balance Scorecard and SWOT analysis has been widely implemented in past studies to help evaluate company performance. For example: food industry (Quezada, Reinao, Palominos, & Oddershede, 2019), dairy goat farm company (Shafira, Qurtubi, M Ragil, & Wahyudhi, 2019), stone mining company (Yohan & Tukhas, 2021), public hospitals (Yuli & Tiara, 2019), and Cooperative company (Soffia, 2021).

## METHOD

The main purpose of this case study is to find out the performance of TNB company from a financial and non-financial perspective. Guided by the Balance Scorecard concept, there are four perspectives on evaluating the company's performance, namely financial, customer, internal business elements, learning and growth. Currently, a minimal study has been conducted using qualitative methods to evaluate the performance of electricity supply companies in Malaysia.

To evaluate the performance of TNB companies, a five-year time series analysis was applied to achieve the company's performance trends. Five annual reports of the TNB Company (2018 to 2022) have been identified and collected from the official website ([www.tnb.com.my](http://www.tnb.com.my)). This qualitative study only uses annual reports to obtain data for several reasons: (i) the annual financial report has received a certified external audit confirmation and has been recognized as valid; (ii) annual reports are statutory reports issued periodically; (iii) annual reports are mandatory documents that all registered companies are required to provide; (iv) annual reports are easily available; and (v) annual reports are widely recognized as the primary means of corporate communication (Smith, Khadijah, & Ahmad Marzuki, 2007).

Information on finance, customers, internal elements of business, and learning and growth disclosed in the company's annual report was analyzed using content analysis. The content analysis methods are appropriate for reviewing corporate reports and have been extensively conducted by recent studies (Carini, Veneziani, Bendotti, & Theodori, 2013; Smith, Khadijah, & Ahmad Marzuki, 2007; Faridah, 2010). In addition, content analysis provides a low-cost form of analysis, and provides data that can be measured objectively, reliably and systematically (Krippendorff, 2004). This method also takes into account the low response rate received from respondents if using a questionnaire-based survey (Smith, Khadijah, & Ahmad Marzuki, 2007).

In this study, the performance evaluation indicators used are: (i) financial perspective which has been measured according to financial ratios. Such as liquidity, solvency and profitability ratios. (ii) customer perspective. Focusing on market share, number of customers, customer satisfaction index, number of complaints received and number of complaints resolved. (iii) internal business elements perspective. The performance evaluation indicators used are the corporate reputation index, the number of employees, operating expenses, the number of employee deaths, the number of local and international suppliers. Finally, (iv) learning and growth perspective. This study used the employee engagement barometer score, employee turnover rate, total training hours, total training investment, and percentage of trained employees.

The conclusion of this study is presented using a SWOT analysis based on the results of the Balance Scorecard performance item variables for the TNB company. The meaning of SWOT is S for strength, W for weakness, O for opportunity, and T for threat.

## RESULTS AND DISCUSSION

This study aims to understand the performance of TNB companies from a financial and non-financial perspective. Based on the information contained in the five annual reports of TNB companies from the year 2018 to 2022, the performance evaluations were analyzed based on four perspectives i.e. finance, customers, internal business elements of the company, and learning & growth.

### (i) Financial Performance Perspective

This study divides the financial perspective into three performance items namely liquidity, solvency and profitability.

#### Liquidity Ratio

Liquidity item represent the company's cash strength, it can be measured by current ratio and quick ratio. In finance position, the ratio value needs to be more than 1.0 point. Particularly the quick ratio item which indicates

availability of immediate cash of the company to pay its short term liabilities (Mohd Nizal, Rodziah , & Shelia, 2020).

When comparing current ratio and quick ratio data for year 2018 and year 2020, it is realized that there is a drop in points on the current ratio and quick ratio (See Table 1. The current ratio in year 2018 is 1.41. While in year 2020, it is 0.97. For the quick ratios, in year 2018 is 1.35 and in year 2020 is 0.91. The possibility of a decline in the TNB company's cash performance is due to the economic impact of the COVID-19 pandemic. Many small, medium and large businesses were forced to stop operations causing the use of electricity to fall among consumers i.e. manufacturers or producers.

However, the company's liquidity performance improved in year 2021 to year 2022. The current ratio increased by 0.21 points from 0.99 in the year 2021 to 1.20 in the year 2022. While the quick ratio in the year 2021 was 0.92 and in year 2022 was 1.11. TNB's cash position is likely to improve due to the increase in electricity consumption by consumers after no further obstacles for all types of businesses to operate again in the country. This means, in the year 2022 the current ratio position shows that the company is able to pay as much as RM1.20 for every RM1 of current liabilities. Meanwhile, for the quick ratio, TNB company has RM1.11 to pay RM1 of current liabilities.

**Table 1.** Company cash/liquidity position data.

Year	Current Assets (RM Billion)	Current Liabilities (RM Billion)	Current Ratio	Quick Ratio
2018	30.75	21.77	1.41	1.35
2019	25.75	23.80	1.08	1.00
2020	27.80	28.80	0.97	0.91
2021	27.02	27.22	0.99	0.92
2022	45.06	37.60	1.20	1.11

### Solvency Ratio

The solvency item is to measure the company's ability to meet its long-term financial commitments. First solvency item is debt to equity ratio (Table 2). In year 2018, the company's shareholders bear a total debt per equity of RM0.50 for every RM1. By year 2022, the company has a total debt of RM0.83 for each RM1 equity. A comparison of debt to equity ratio for the year 2018 to year 2022, shows that there is an increase in debt compared to the company's equity. The higher the debt ratio means that the company's shareholders, which is the equity owner, will face financial risk and difficulty in meeting its long-term liabilities.

**Table 2.** Company solvency data.

Year	Total Assets (RM Billion)	Total Debts (RM Billion)	Debt to Equity Ratio	Debt to Total Assets Ratio
2018	153.69	94.64	0.50	0.62
2019	178.85	119.57	0.53	0.67
2020	181.43	123.98	0.63	0.68
2021	200.42	124.21	0.73	0.62
2022	205.92	144.96	0.83	0.70

In the year 2018, the ratio of debt to total assets was 0.62. This means that 62% of the company's assets are financed by debt. While the remaining 38%, assets are financed in cash or equity. In year 2022, there is an increase in the ratio of debt to total assets which is 0.70. This means that there is an increase in debt for the financing of the company's assets by 8%. In conclusion, a higher ratio of debt to total assets will put the company at financial risk i.e. failed to finance the debt of the company's assets.

Figure 2 shows a graph comparing the company's total assets and total debt. It shows that the company's total assets exceed the company's total debt. However, if the total debt exceeds the total assets of the company, it is an indicator that the company will go bankrupt.

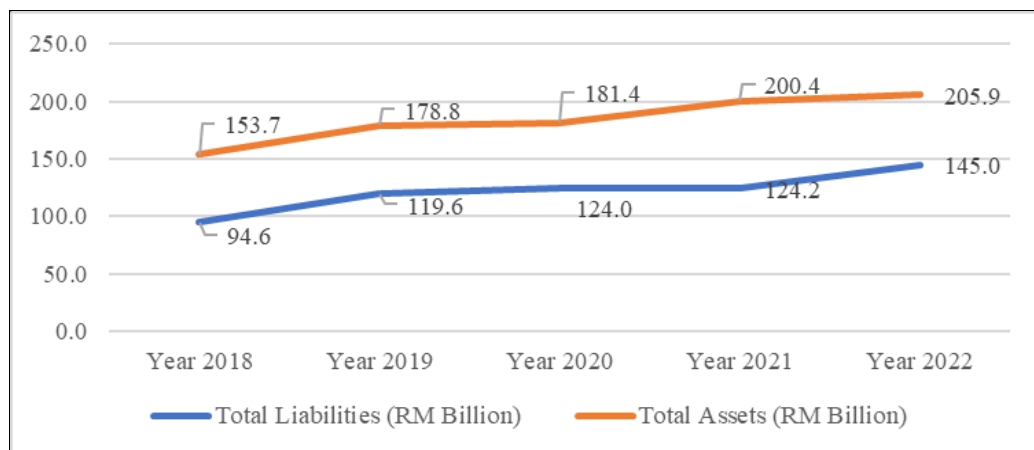


Figure 2. Company’s total assets and total liabilities

**Profitability Ratio**

Profitability ratios measure a company's ability to earn business profits. The first item measuring profit performance is (i) total revenue, which is the company's total income. In year 2018 the total revenue was RM50.392 billion. There was a decrease in total revenue in 2020 which was RM43.976 billion. This may be due to the quarantine due to the COVID-19 pandemic affecting the customer's business operations. However, in year 2022 there was an increase in total revenue to RM50.868 billion. Refer to Table 3.

The second performance item is (ii) operating profit. For the year 2018, the operating profit was RM6.876 billion. While in the year 2022 was RM9.409 billion. This shows an upward trend of RM2.533 billion in operating profit for the five-year period (2018-2022).

The third performance item is (iii) net profit. For the year 2018, the net profit was RM3.745 billion. While in 2022 it was RM3.557 billion. The comparison shows a downward trend in net profit of RM0.188 billion within five years.

The fourth performance item is (iv) the company’s net profit margin, it shows a downward trend. In the year 2018, the net profit margin was 7.4%. While in 2022 it was 6.8%. Decrease by 0.6% of net profit margin.

Table 3. Profitability ratio data of the company.

Year	Total Revenue (RM Billion)	Operating Profit (RM Billion)	Net Profit (RM Billion)	Net Profit Margin (%)
2018	50.393	6.876	3.745	7.4
2019	50.940	8.207	4.445	8.9
2020	43.976	7.359	3.616	8.2
2021	48.120	8.083	3.865	7.6
2022	50.868	9.409	3.557	6.8

The fifth performance item is (v) expenses other than the company's operating expenses, showing an upward trend, such as foreign exchange losses and financial costs. In the year 2022, the cost was RM4.567 billion, as compared to the year 2018 the amount was RM2.107 billion. These expenses have caused the net profit margin to decrease in the year 2022 to 6.8%. Compared to 2018, the net profit margin was 7.4%.

However, based on the trend of earnings margin before interest, tax, depreciation and amortization for five years (2018 to 2022), there is a significant increase in income. The margin in 2018 was 27%. While in 2022 was 41% which is an increase of 14.4%. (Figure 3).

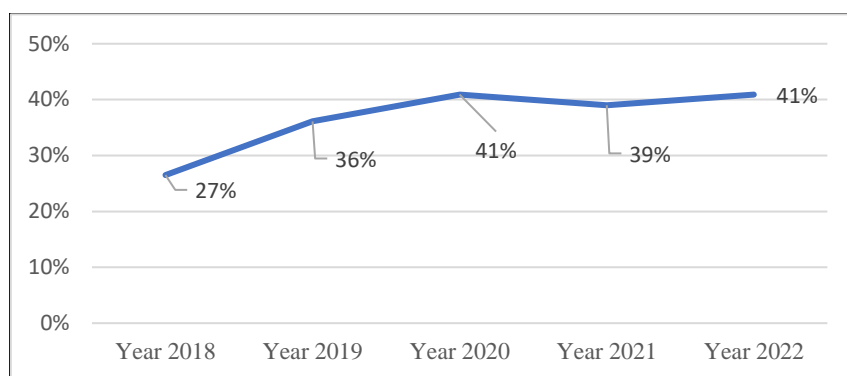


Figure 3. Earnings margin before interest, taxes, depreciation and amortization (%)

**(ii) Customer Perspective Performance**

Based on the TNB company's annual reports from year 2018 to 2022, information related to the performance of the customer's perspective has been obtained, refer to Table 4. Customer performance items: (i) number of customers. In year 2018 the number of customers was 9.09 million. Whileas in year 2022, the company has a total of 10.58 million customers. It has increased by 1.49 million. Next, (ii) customer satisfaction index. The trend shows an increase from 81% to 87% over the five-year period (2018 to 2022).

Customer performance item: (iii) market share. It shows a decrease from 52.79% in year 2021 to 49.84% in year 2022. The downward trend may due to the choice of customers in using other alternatives for energy sources such as solar and gas to replace the electricity system in homes and buildings (Bernama, 2023). Next, customer performance item: (iv) number of complaints received. In 2021 the number of complaints from customers were 33,753. Whileas in year 2022, it has increased to 636,751 number of complaints. The number of complaints received has increased 18 times. This is likely from the use of the TNB apps that has been introduced to smartphone users, making it easier to make complaints transparently and quickly. Next, (v) Percentage of complaints resolved. In year 2022, 99.67% of the complaints have been resolved. The efficiency of customer complaint resolution services by TNB companies can be seen through the customer satisfaction index which reached 87% in year 2022.

Table 4. Customer perspective data.

Year	Total Customers (Juta)	Customer Satisfaction Indeks (%)	Market Share (%)	Total Number of Complaints Received	Complaints Resolved (%)
2018	9.04	81	49.90	-	-
2019	9.25	81	51.42	35,747	99.00
2020	10.08	86	52.21	45,275	99.00
2021	9.66	87	52.79	33,753	99.00
2022	10.58	87	49.84	636,751	99.67

**(iii) Internal Business Perspective Performance**

In assessing the performance of the TNB company's internal business elements, various items were analyzed, refer to Table 5. Performance items: (i) corporate reputation index. The TNB company's corporate reputation indexes for four consecutive years from 2018 to 2021 has exceeded 80% annually. However in year 2022, the corporate reputation index has dropped to 79%. This is likely due to the challenges surrounding the macro economy during the post-COVID-19 pandemic which has led to lower consumer sentiment and a more conservative approach to scoring corporate reputation index (TNB, 2023d).

Performance item: (ii) number of employees. TNB has a large number of employees, 34,699 people in 2022. With this amount, the company has a good skilled and less skilled workforce. As well as having experienced and loyal employees.

Next, performance item: (iii) number of workers deceased. The average number of death was 2 people for four consecutive years (2018-2021). But no death occurred in year 2022 while performing job duties. This is probably



that security measures have been improved while doing the job, as number of OSHA trained has increased every year (2019 to 2022) (TNB, 2023b).

Performance item: (iv) number of suppliers. TNB company prioritizes local suppliers for the supply of materials compared to overseas suppliers. In year 2022, it was found that 96.6% of total suppliers were local suppliers and the rest were international suppliers, 3.4%. Advantage of using local suppliers services is it will save foreign exchange cost compared to hiring international suppliers.

**Table 5.** Internal business perspective data.

Year	Corporate Reputation Index (%)	Number of Employees	Number of Workers Deceased	Percentage of Local Suppliers (%)	Percentage of International Suppliers (%)
2018	88	35,574	2	97	3
2019	87	36,307	2	98	2
2020	81	35,576	1	98	2
2021	88	34,938	2	96.4	3.6
2022	79	34,699	0	96.6	3.4

Performance item: (v) operating expenses. Table 6 shows the operating cost data and operating results. Operating costs increase each year. In 2018 operating cost was RM43.854 billion. Whileas in 2022 it was RM64.612 billion. Performance item: (vi) operational revenue. Operating revenue in year 2018 and 2022 were RM50.392 billion and RM50.867 billion.

Performance item: (vii) operating expenses to operating ratio. The ratio of operating expenses to operating results in 2022 exceeds 100%, i.e. 127%. This indicates that the company is unable to perform cost efficiency from operating activities One of the reasons is the drastic increase in the cost of fuel by almost 65%. The fuel cost in the year 2021 was RM15.225 billion, while in 2022, it increased to RM25.085 billion.

**Table 6.** Comparative data of operating expenses and operating results.

Year	Operational Expenses (RM Billion)	Operational Revenue (RM Billion)	Operating Expenses to Operating Revenue Ratio (%)	Fuel Costs (RM Billion)
2018	43.854	50.392	87%	11.634
2019	43.561	50.939	85.5%	10.848
2020	37.132	43.976	84.4%	9.514
2021	44.524	48.120	92.5%	15.225
2022	64.612	50.867	127%	25.085

**(iv) Learning and Development Perspective Performance**

Learning and development performance for TNB companies were measured through several items. Refer to Table 7. Performance items: (i) total training time. In year 2019 the total training time was 69,190 hours. It has dropped drastically in the year 2022 to 27,253 hours. The training activities attended include Health Safety & Environment Training, Digital Skills Training, Integrated Learning Solution (ILSAS) Electric Vehicle Training Hub, and others. Performance item: (ii) trained workers. The percentage of trained work in 2019 was 16%. While in 2022 it was 12%. Decreased by 4%. Next, performance item: (iii) number of OSHA trained. The number of employees completing health, safety & environment training has increased every year (2019 to 2022). The cumulative total is 15,556 people.

**Table 7.** Learning and development perspective data.

Year	Total Training Time (Hour)	Trained Workers (%)	Number of OSHA Trained Workers (People)
2018	-	-	-
2019	69,190	16	4,539
2020	16,813	4	1,027
2021	103,225	22	5,943
2022	27,253	12	4,047

Table 8 shows the performance item: (iv) total learning investment. In year 2018, the company has invested a total of RM142 million. While in year 2022, the amount spent was RM161 million. The amount of investment has increased by RM19 million. Next, performance item: (v) employee turnover rate. The employee turnover rate is an average of 3.7% for the entire period of 2019-2022. Finally, performance item: (vi) barometer score of employee. The score is 86.6% in year 2022. Showing an increase compared to year 2021 is only 85%.

**Table 8.** Learning and development perspective data.

Year	Total Learning Investment (RM Million)	Employee Turnover Rate (%)	Employee Engagement Barometer Score (%)
2018	142	-	86
2019	183	3.8%	89
2020	76.5	3.5%	89
2021	65.53	3.6%	85
2022	161	3.8%	87

## CONCLUSION AND RECOMMENDATION

The conclusion of this study was presented using SWOT analysis based on the results of the Balance Scorecard performance item variables for the TNB company. A combination of Balance Scorecard and SWOT analysis is seen to be able to provide a clearer description of TNB's company performance. This approach has been widely used in past studies to measure company performance (Quezada, Reinao, Palominos, & Oddershede, 2019; Shafira, Qurtubi, M Ragil, & Wahyudhi, 2019; Yuli & Tiara, 2019; Yohan & Tukhas, 2021; Soffia, 2021).

Strengths of TNB company: (i) has a large number of customers. In the year 2022, it is reported that the number of customers was 10.58 million customers. Along with the rapid growth of housing and business commercial centers, the number of customers and profits are expected to increase in the future. (ii) TNB company has many assets worth RM205.922 billion. If management can increase the use of assets more efficiently, the company has the potential to multiply its profit performance (Brealey, Myers, & Allen, 2011). (iii) loyal and skilled workers. TNB Company has a large number of employees which is 34,699 people. The employee turnover rate is also low at a rate of 3.8% per year. This means that they are loyal and skilled workers as a result of the amount of training provided each year. In conclusion, these three elements of strength which are customers, assets and employees are expected to drive the economic strength and growth of the company in the future, if managed with efficiency and in need of effective strategic plans.

Weakness of TNB company: (i) the company has a large debt and faces the risk of not being able to repay short and long-term debt. The comparison of the total debt to assets-ratio is 70%. It has a very high debt ratio and can bring bad financial risk to the company. (ii) very low return on assets of only around 2.2% in the year 2022. A sustainable strategy should be carried out by the management to ensure that assets are used efficiently and cost-saving. (iii) the company's liquidity or cash position is low. In the year 2022, the company's quick ratio has a liquidity of RM1.11 to pay for every RM1 of current liabilities. In conclusion, large debts, inefficient use of assets to generate sales, and low cash liquidity are major weaknesses of TNB company. Therefore, the management should formulate a strategy to improve the company's internal weaknesses immediately.

Opportunities of TNB company: (i) explore overseas business opportunities and exchange expertise abroad. Currently, TNB has already operated businesses overseas such as the United Kingdom, Kuwait, Pakistan and Cambodia. (ii) build more electric vehicle charging stations or hubs in Peninsular Malaysia, Sarawak and Sabah. It is in line with the current trend of customers using electric cars that need to be recharged. (iii) empower the

research and development unit. TNB's employees' efficiency and technology are able to solve most of the customer complaints. Based on these advantages, studies and research should be carried out by the company to prevent the same problem from recurring. This is also to empower employees and company assets in the future. In conclusion, the company will have an opportunity to continue to grow and make more profit, if it can explore new business opportunities abroad, build more electric vehicle charging hubs and strengthen expertise through research and development.

Threat of TNB company: (i) Operating expenses increase every year. For example, the operating expenses have increased at a rate of 45% from year 2021 to year 2022. One of the factors is the cost of fuel which has increased by 65% from year 2021 to 2022. TNB Company needs to find a cheaper and sustainable source of fuel in the future. For example, switch from coal to windmills and solar power. (ii) foreign exchange losses. Every year the company experiences a high foreign currency exchange loss. In year 2022 the loss was RM223.5 million. It is recommended that TNB company has savings in the form of foreign currency or savings in overseas banks to offset losses due to foreign currency exchange. For example: dinar currency and american dollar currency. In conclusion, external threats faced by the company need to be well managed. In order to avoid it affects the company's performance. Two threat elements that need to be focused on by the company are the source of raw material or fuel costs and foreign currency exchange.

Overall, TNB's performance position is in good shape with billions of ringgit in profits every year. However, in order to strengthen the growth and profitability of the company, several things need to be done as discussed above. It is recommended that TNB management review the TNB Code of Ethics under customer focus by understanding customer needs and satisfaction (TNB, 2023). This is because the proposed increase in electricity tariffs will only increase the cost of living (Ahmad Mustakim & Azzman, 2023) which is against the needs and satisfaction of consumers. As a company with GLC status, it is appropriate for TNB to carry out its corporate social responsibility by not increasing electricity tariffs in the future to ease the economic burden of consumers in Malaysia. This study found that the maintenance of the electricity tariff is not seen to affect TNB's financial performance if the government continues to provide subsidies every year to the people in need.

#### **Future Research**

This study can be further expanded by making comparisons with electricity companies in other countries. Like in Southeast Asian countries and European countries. The Balance Scorecard concept can be applied to the study and further draw conclusions using SWOT analysis.

#### **DECLARATION STATEMENT**

The author confirms this manuscript provides an honest, accurate, and transparent account of the reported study. No crucial aspects of the study have been omitted, and any discrepancies from the planned (and, if applicable, registered) study have been appropriately explained.

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#### **CONFLICT OF INTEREST**

The author declare no conflict of interest and there are no financial interests to disclose.

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