

## Creating A Better Competitive Edge Through Environmental Sustainability: A Case Study of Panasonic

Daisy Mui Hung Kee<sup>1</sup>, Tiveeya Sri Saravanan<sup>2</sup>, Sharnitra Sridaran<sup>3</sup>, Syazwina Syahrin<sup>4</sup>, Tulasii Rajandran<sup>5</sup>, Jiale Tian<sup>6</sup>, Huayan Zhang<sup>7</sup>

Universiti Sains Malaysia<sup>1,2,3,4,5,6,7</sup>

Jalan Sg Dua, 11800 Minden, Pulau Pinang, Malaysia.

Correspondence Email: daisy@usm.my

### ABSTRACT

This paper investigates Panasonic's strategies for its better competitive edge through environmental sustainability. The study analyzed the data collected from the company's websites, customers' personal experiences, and questionnaires. The surveys on customers' feedback on Panasonic products and services were carried out. This study's literature contribution value lies in its investigation of how Panasonic's environmental sustainability has led the company to a competitive advantage. The findings of this paper have significant importance since people today are more concerned about environmental sustainability. Strategies and practices that create a sustainable world economy were discussed.

**Keywords:** Competitive Edge, Environmental Sustainability, Malaysia, Panasonic

### INTRODUCTION

Matsushita Konosuke founded Panasonic in March 1918 (Belanger, 2018). Matsushita had come across a new sort of light socket design right after working as an apprentice to Hibachi and bicycle makers. It is a desire which drives Panasonic to create things of value. The fledgling company takes its first step towards becoming today's giant electronic manufacturer due to its hard work and dedication to creating innovative products.

Its slogan 'A Better Life, A Better World' emphasizes that Panasonic always makes a firm commitment to come up with a better world, continuously contributing to society's evolution and people's happiness worldwide by creating a better competitive edge through environmental sustainability (Tsuga, n.d.). The company employed about 330,000 employees by March 31, 2012. In the same year, its total sales reached RM 308,134.68, 53% of which came from Japan, Asia (25%), the U.S (12%), and Europe (10%). The company also invested a combined of ¥ 520,216 million in R&D, equivalent to 6.6 percent of its sales of that year. For three decades, from the 1980s to the 2000s, it was popular with its patent applications.

Panasonic filed the total quantity of battery patents from 2000 to 2018. It was the second highest in the world, according to the Patent Office of Europe in 2020. One of Panasonic's operations is grouped into seven "domain businesses" as of July 2020, including appliances, life solutions, connection solutions, automotive, industrial solutions, and two overseas divisions in the U.S. and Asia overseeing the businesses. Each of the companies can compose multiple subsidiaries. Apart from that, a total of 80 branches all over the world exist until today.

Panasonic's sales revenue from 2009 to 2020 amounted to around USD 70.4 billion. According to Panasonic's statistics, there was a decrease of five billion U.S. dollars (Panasonic Manufacturing Malaysia Berhad, 2020). Among the negative factors that led to the company's worse financial results was a rise in Japan's consumption tax and the coronavirus pandemic spread. In the Malaysian market, its sales have reached about RM 1.1 billion in the 2020 fiscal year. Based on the gain or loss statement and other comprehensive income for the year ended on March 31, 2020, the year's gain or profit and total comprehensive income of 2019 were RM 105,752,000, whereas, for 2020, it was RM 116,989,000. It shows a rise of RM 11,237,000.

There are several reasons people are keeping on buying Panasonic products. The primary reason is that Panasonic is mainly known for its long-lasting products for more than ten years on average. This quality product could save maintenance costs despite (Steen, 2005) the product price can be high at times. Panasonic believes that low-quality products could make consumers give low ratings to the producers (Wenxuan, Kee, Yi, Chang, & Zheng, 2019). In addition to their valuable functions and user-friendliness, Panasonic universal designs create more value for customers. Panasonic never stops updating modern living quality by keeping abreast of progressive technology development.

Panasonic applies some principles to actualize the Universal Design Policy. They comprise six fundamental principles, including easy-to- lucid operation-making, easy-to-understand indications and expressions, users' stress-free postures and movements, users' movements and space, users' safety and peace of mind, and operating environment. Panasonic also takes some initiatives to maintain its sustainability, such as 'Environment Vision 2050'. The vision about environmental sustainability management was formulated in 2017 in the long run. In that vision, Panasonic is to achieve "a better life" and "a sustainable global environment," work towards the creation and more efficient utilization of energy which exceeds the amount of energy used, for a society with clean energy and a more comfortable lifestyle (Panasonic, 2017). This indicates that Panasonic is on its way to make the "energy created" exceed the "energy used."

Further, Panasonic is also endeavoring to reduce carbon dioxide emissions, recycling and reusing limited water resources, reducing chemical substances' impact, and conserving biodiversity. Panasonic is working comprehensively to reduce carbon dioxide emissions by saving energy, creating energy, storing energy, and managing energy. Also, Panasonic is conserving biodiversity by cooperating with local governments, environmental NPOs, and specialist organizations to ensure environmental sustainability. Panasonic reduces the impact of chemical substances on human health and the environment and conserves water resources through efficient water and contamination prevention. Lastly, it is also working hard to use resources by pursuing recycling-oriented manufactures efficiently.

Today, people are more concerned about environment-friendly products for the sake of environmental sustainability (Craato, et al., 2020). Sehgal et al (2020) argued that environmental sustainability could reduce cost since it saves resources and reduces waste. We also found some ways to develop strategies and practices to create an economic world our planet can indefinitely support. This research aims to help Panasonic create a better competitive edge by developing environmentally sustainable strategies to sustain the environment and maximize its profits.

## RESEARCH METHOD

As for the investigation and research of Panasonic products, we analyzed the sales volumes, product releases, marketing strategies, and other aspects of Panasonic products through market research and its performance and other indicators. Besides, a comprehensive online and offline investigation was also conducted. We adopted the online survey using Google Form as we can further understand how customers see Panasonic. The respondents were Panasonic consumers because they were customers who have bought Panasonic products and known the products well.

It took us approximately two weeks to gather all the survey responses. The google form was created on November 1, 2020, and forwarded to the customers. Participants were given 10 minutes to fill in the survey anonymously, and a total of 100 customers have responded to the survey. The sampling method used to gather responses for this survey was the random sampling method, where every person in the population has a chance to complete this questionnaire. We used both primary data and secondary data in this research to obtain several data needed. The primary data we used was the online survey form, and secondary data were collected from some information on the company's website. We used both data to come to more accurate and efficient conclusions.

## RESULTS AND DISCUSSION

After distributing online questionnaires with Google Form to 100 participants selected by Random Sampling Method, the data were then analyzed. The respondents consist of various age groups, gender, races, nationalities, and marital statuses (see Table 1). Over half of the participants were male (51%). By age, 58% were between 18 to 20 years old, 27% were between 21 to 30 years old, and 15% were above 31 years old. With the difference of 2, we have slightly more female respondents than male respondents. By ethnicity, most of the respondents are Indians (60%), followed by Chinese respondents (25%), and 14% are Malay respondents. By nationality, 80% of the respondents are from Malaysia, and the rest are international respondents. For marital status, most respondents (83%) are single, 17% of the respondents are married, and none of the respondents are divorced or widowed. Besides, 93% of the respondents have used Panasonic products. This shows that this brand is well-known and widely used in Malaysia.

Furthermore, 40% of the respondents stated that sometimes they buy Panasonic products, and 38% of the respondents buy these products once in a while when necessary. This implies that more than 3/4 of the respondents buy Panasonic products. However, there are around 16% of the respondents frequently buy Panasonic products. They can also be categorized as Panasonic's loyal customers. There may be several aspects that motivated the respondents to like buying Panasonic products. These include quality, low maintenance cost, affordable cost, good investment, environmentally friendly, and universal design. Lastly, 67% of the respondents chose to buy Panasonic products because of their high-end quality.

**Table 1. Summary of Respondents' Demography (N=100)**

<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Age</b>		
18 – 20	58	58
21 – 30	27	27
31 – 40	6	6
41 – 50	6	6
51 – 60	3	3
<b>Gender</b>		
Male	49	49
Female	51	51
<b>Race</b>		
Malay	14	14
Chinese	25	25
Indian	60	60
Punjabi	1	1
<b>Nationality</b>		
Local	80	80
International	20	20
<b>Marital Status</b>		
Single	83	83
Married	17	17
Divorced/Separated	0	0
Widowed	0	0
<b>Have you ever used Panasonic products?</b>		
Yes	93	93.0
No	7	7.0
<b>How often do you buy Panasonic products?</b>		
Never	6	6.0
Once in a while (When it is necessary)	38	38.0
Sometimes	40	40.0
Often	16	16.0
<b>Why do you like to buy Panasonic products?</b>		
Quality	67	67.0
Low Maintenances	7	7.0
Cheap	13	13.0
Good Investment	7	7.0
Environmental Friendly	3	3.0
Universal Design	3	3.0
<b>What are the Panasonic products you are currently using?</b>		
Television	15	15.0
Radio	5	5.0
Refrigerator	14	14.0

Oven	4	4.0
Rice Cooker	9	9.0
Microwave	0	0
Blender	8	8.0
Juice Maker	3	3.0
Washing Machine	12	12.0
Heater	5	5.0
Fan	12	12.0
Air Conditioner	12	12.0
Trimmer	1	1.0

**Do you want to recommend Panasonic products to your friends?**

Most Likely	56	56
Likely	39	39
Unlikely	5	5
Least Unlikely	0	0

The questionnaires circulated online included several Panasonic products listed out for the respondents to choose they are currently using. The products were televisions, radios, refrigerators, ovens, rice cookers, microwaves, blenders, juice makers, washing machines, heaters, fans, air conditioners, and trimmers. Out of all these products, most respondents are currently using Panasonic's television (15.0%), refrigerators (14.0%).

Along with that, the majority of respondents are satisfied with Panasonic products as they would recommend them to their friends (56.0% respondents), while 39.0% of respondents would likely recommend them. This concludes that most respondents (95.0%) are willing to recommend Panasonic products to their friends. This insinuates their satisfaction with Panasonic after-sales service. According to Pattiata and Pathak (2019), quality service brings customer satisfaction.

**Table 2. Summary of Respondents' Interest Towards Panasonic Products (N=100)**

Responses	Frequency	Percentage (100%)
<b>11. Do you think your friend would be interested in Panasonic's product?</b>		
Most likely	46	46
Likely	50	50
Unlikely	4	4
Least unlikely	0	0
<b>12. If I want to buy a Panasonic product, I am concerned about the price.</b>		
Yes	85	85
No	15	15
<b>13. When it comes to Panasonic, what is the first product you think of?</b>		
Television	31	31
Fan	16	16
Blender	10	10
Air Conditioner	15	15
Refrigerator	3	3
Camera	4	4

Cooker	2	2
Radio	2	2
Microwave oven	2	2
Hair dryer	5	5
Bread toaster	4	4
Washing machine	4	4
Kettle	2	2
<b>14. I want to try Panasonic's products.</b>		
1- Not at all	3	3
2- To some extent	2	2
3- To a moderate extent	11	11
4- To a large extent	40	40
5- To a very large extent	44	44
<b>15. I would pay a higher price for Panasonic products.</b>		
1- Not at all	4	4
2- To some extent	8	8
3- To a moderate extent	40	40
4- To a large extent	19	19
5- To a very large extent	29	29

Based on the data collected from the 100 respondents as presented in Table 2 above, we can see that 46 respondents believe that their friend would most likely be interested in Panasonic products. Meanwhile, half of the respondents believed that their friend would likely be interested in buying Panasonic products. This leads to the conclusion that most customers like to purchase Panasonic products due to their satisfactory quality. Additionally, most customers said that they are concerned about the price when buying a Panasonic product. The respondents (85%) agreed to check the price of a Panasonic product before buying them.

Addedly, Panasonic televisions will be the first product to buy by 31% of the respondents. Others will consider Panasonic fans (16%), Panasonic air conditioners (15%), and Panasonic blenders (10%). This signifies that Panasonic televisions come to customer's first impression before Panasonic fans.

Furthermore, Table 2 reveals that the majority of the respondents (44%) are willing to try Panasonic products to a considerable extent, while 40% of the respondents are willing to try Panasonic products to a large extent. This suggests that most of the customers are willing to try out Panasonic's product. This also implies great customer satisfaction with Panasonic product quality. Besides, 40% of respondents agreed to a moderate extent to pay a higher price for Panasonic's product. Meanwhile, 29% of them agree to a very large extent to pay a higher price for Panasonic's product, and 19% agree to a large extent to pay a higher price for Panasonic products (Essoussi & Linton, 2010).

**Table 3. Summary of Respondents towards Panasonic Products**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage (100%)</b>
<b>15. I am familiar with other brand products, but I would like to introduce Panasonic products to my friends.</b>		
1- Not at all	0	0
2- To some extent	10	10
3- To a moderate extent	22	22
4- To a large extent	30	30
5- To a very large extent	38	38
<b>16. I will continue to support Panasonic's products and look forward to more new products from Panasonic</b>		
1- Not at all	2	2
2- To some extent	5	5
3- To a moderate extent	20	20
4- To a large extent	28	28
5- To a very large extent	45	45
<b>18. I'm glad I've used Panasonic products.</b>		
1- Not at all	3	3
2- To some extent	8	8
3- To a moderate extent	17	17
4- To a large extent	33	33
5- To a very large extent	39	39
<b>19. I'm sure I'm quite satisfied with the latest version of Panasonic products.</b>		
1- Not at all	2	2
2- To some extent	5	5
3- To a moderate extent	15	15
4- To a large extent	38	38
5- To a very large extent	40	40
<b>20. The after-sales service of Panasonic products makes me feel at ease with the products.</b>		
1- Not at all	2	2
2- To some extent	5	5
3- To a moderate extent	26	26
4- To a large extent	26	26
5- To a very large extent	41	41

Table 3 presents a summary of respondents towards Panasonic products. It shows that all the respondents agree, even to some extent that they are highly familiar with the other brands of products. However, they would like to introduce Panasonic products to their friends. This emphasizes that 100% of the respondents were satisfied with Panasonic products, even in such very small extent that they were willing to recommend Panasonic to their friends. Addedly, 45% of the respondents firmly stated that they would continue to use Panasonic products and look forward to Panasonic's new products in the future, while 20% of respondents will continue to support Panasonic to a large extent.

Regarding customers' usage experience, 39% and 33% of the respondents stated that they were delighted to use Panasonic products and were relatively satisfied with Panasonic (Suvanmanee, et al., 2020). Apart from that, 40% of respondents responded that they were quite satisfied with the latest Panasonic products. After-sales service satisfaction, 46% of the respondents were also delighted with the after-sales service, while 26% of the respondents were relatively satisfied and felt mediocre. This once again confirms that most of the respondents are satisfied with Panasonic products.

**Table 4. Summary of Respondents towards Panasonic Products**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage (100%)</b>
<b>21. In general, I am still looking forward to Panasonic products in the future.</b>		
1- Not at all	1	1
2- To some extent	5	5
3- To a moderate extent	14	14
4- To a large extent	29	29
5- To a very large extent	51	51
<b>22. I use Panasonic products because they are very environmentally friendly.</b>		
1- Not at all	2	2
2- To some extent	4	4
3- To a moderate extent	19	19
4- To a large extent	34	34
5- To a very large extent	41	41
<b>23. I buy Panasonic products because they are also recycling-oriented manufacturing.</b>		
1- Not at all	3	3
2- To some extent	8	8
3- To a moderate extent	17	17
4- To a large extent	33	33
5- To a very large extent	39	39
<b>24. I buy Panasonic products because the impact of a chemical substance is low and conserve biodiversity.</b>		

1- Not at all	1	1
2- To some extent	5	5
3- To a moderate extent	17	17
4- To a large extent	38	38
5- To a very large extent	39	39
<b>25. I would like to buy Panasonic products as it is creating a society with clean energy and a more comfortable lifestyle</b>		
1- Not at all	1	1
2- To some extent	6	6
3- To a moderate extent	26	26
4- To a large extent	27	27
5- To a very large extent	40	40

Table 4 shows 80% of the respondents were looking forward to Panasonic products in the future. This underlies customers' loyalty as they felt highly satisfied with the products. Besides that, 98 respondents agreed to some, moderate and large extent that they bought Panasonic products since they are environmentally friendly. This highlights people's concern about Mother Nature by selecting eco-friendly products. This could be a positive contribution to environmental sustainability (Kanchanapibul, Lacka, Wang & Chan, 2014).

The next major finding is that 39% of respondents agreed to a very large extent and 33% agree to a large extent that they bought Panasonic products due to their recycling-oriented products (Wahab, Abidin & Azhari, 2007). This shows to some extent that people are mindful of taking good care of the environment. Further, Panasonic produces recycling-oriented products to lower the chemical substance and conserve biodiversity (Chen & Tung, 2010). This was the reason of 99% of the respondents bought Panasonic products.

Furthermore, Panasonic concerns its product quality and environmental sustainability (Wesley, Lee & Kim, 2012). This is evident as 40% of the respondents agreed to a very large extent, 27% agreed to a large extent, and 26% agreed to a moderate extent that Panasonic creates a society with clean energy and a more comfortable lifestyle.

**Table 5. Summary of Respondents Towards Panasonic Products**

Responses	Frequency	Percentage (100%)
<b>26. I can see people using the Panasonic products.</b>		
1- Not at all	1	1
2- To some extent	2	2
3- To a moderate extent	8	8
4- To a large extent	26	26
5- To a very large extent	63	63

**27. I know that Panasonic products are very environmentally sustainable.**

1- Not at all	0	0
2- To some extent	2	2
3- To a moderate extent	10	10
4- To a large extent	42	42
5- To a very large extent	46	46

**28. I can see the commercials for Panasonic.**

1- Not at all	2	2
2- To some extent	17	17
3- To a moderate extent	24	24
4- To a large extent	18	18
5- To a very large extent	39	39

**29. I know Panasonic to be better known than other brands.**

1- Not at all	4	4
2- To some extent	21	21
3- To a moderate extent	29	29
4- To a large extent	15	15
5- To a very large extent	31	31

**30. If there is anything you would like to say or suggest to Panasonic, please write it down below.**

1. Panasonic is a brand that affordable to buy.
2. Keep improving the good quality.
3. To improve the quality system of the product.
4. Must increase the advertisements

(This question does not involve scaling as described above.)

In Table 5, question 26 asks whether the respondents saw people using Panasonic products. Surprisingly, all respondents replied that they were using the products. Table 5 signifies that 63% of respondents stated that it is common for people to use Panasonic products, and more than 265 agreed to a large extent. This question is ostensibly about the usage of Panasonic products by people; however, it illustrates the impact of Panasonic's products. Table 5 also shows that all of them agreed to some, moderate, large or very large extent that they know that Panasonic products are environmentally sustainable (Marakonon & Panjakajornasak, 2017). This shows that Panasonic's hard work paid off as people are more conscious about the environment.

Table 5 also describes the level of publicity and attention given to Panasonic. Many of the respondents (81%) believed that Panasonic does some commercial advertisings in addition to brochures and LED lighting boards at the cities. Pertaining to the company's competitive strength and influencing degree, 86% of respondents stated that Panasonic is a popular and well-known brand compared to other brands. Additionally, some

respondents suggested Panasonic innovate and bring an excellent after-sales service always.

Some respondents were not happy with its unaffordable price. Half of the respondents highly appreciated and satisfied with the design, price, and quality of Panasonic products. Others argued that Panasonic needs to display more advertisement and its publicity to let more people know about the products and increase sales. Finally, several respondents argued that Panasonic's appearance is unimpressive and old-fashioned (Hermundsdottir & Aspelund, 2020). Their opinions uncover their expectations of Panasonic.

The above description reveals that the consumers are mostly satisfied with Panasonic products. However, a small number of respondents were particularly unsatisfied in some matters such as product usage and the after-sales service. It requires some strategies to be developed by training professional service staff, developing a perfect service system, doing flawless service, and allocating more extensive resources on product development and more profound commitment to creating more convenient and practical products. The above analysis shows that the customers prefer to buy Panasonic products with environmentally sustainable and recyclable manufactured by clean energy. This will conserve the ecosystem and efficiently renew energy, thus creating a better Panasonic with environmental sustainability edge.

## CONCLUSIONS

This research on environmental sustainability for a better competitive edge has uncovered several significant implications. The present study underlined that Panasonic is creating a better competitive edge through environmental sustainability. As well as that, it is evident that Panasonic has created environmentally sustainable products. Despite its quality products, this was one of the major drivers of its customer loyalty and satisfaction. Panasonic products were considered sustainable products due to their eco-friendliness, recyclability, fewer carbon footprints, and lower impact of chemical substances by its four concepts of saving, creating, storing, and managing energy. Finally, Panasonic should keep up with the present and devote itself to the development and utilization of new energy to create a better competitive edge by developing more eco-friendly and environmentally sustainable products by improving the service system and resources. Future researchers shall do more in-depth research on how sustainable products affect companies' survival, such as Panasonic. With this study findings, we learned how to create a competitive advantage through environmental sustainability.

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