

## ANALISIS POSITIONING AIR MINERAL TIRTA ONE BERDASARKAN PERCEPTUAL MAP DENGAN METODE MULTIDIMENSIONAL SCALLING

### POSITIONING ANALYSIS OF TIRTA ONE'S MINERAL WATER BASED ON PERCEPTUAL MAP USING MULTI DIMENSIONAL SCALLING METHOD

<sup>1</sup>Nur Shiyaam, <sup>2</sup>Husni Amani, <sup>3</sup>Sari Wulandari

<sup>1,2,3</sup>Program Studi S1 Teknik Industri. Fakultas Rekayasa Industri. Universitas Telkom

<sup>1</sup>[nur.shiyaam@gmail.com](mailto:nur.shiyaam@gmail.com), <sup>2</sup>[husni.amani@gmail.com](mailto:husni.amani@gmail.com), <sup>3</sup>[sariwulandari42@gmail.com](mailto:sariwulandari42@gmail.com)

#### ABSTRAK:

Dewasa ini, industri AMDK berkembang pesat dalam beberapa tahun terakhir. Perkembangan ini ditandai dengan banyaknya merek-merek baru yang mulai bermunculan dan membuat persaingan di industri AMDK menjadi sangat ketat. PT. Syahid Global Internasional merupakan salah satu perusahaan yang bergerak dalam industri AMDK dengan menjual produk air mineral dengan merek Tirta One. Perusahaan tersebut telah melakukan penjualan ke beberapa kota di Jawa Barat seperti; Kuningan, Majalengka, Indramayu, Cirebon, Tasikmalaya, Tangerang, Jakarta dan Kabupaten Bandung. Akan tetapi total penjualan dari Tirta One belum memenuhi target penjualan yang ditentukan oleh perusahaan.

Terkait hal tersebut, maka perlu dilakukan penelitian mengenai *positioning* agar diketahui atribut-atribut yang menjadi keunggulan dari Tirta One. Sehingga, atribut-atribut tersebut dapat membentuk *brand image* dari Tirta One dan membantu perusahaan menjalankan strategi promosi untuk memperkenalkan Tirta One kepada masyarakat agar dapat meningkatkan hasil penjualan.

Melalui penelitian ini, akan dilakukan pemetaan *positioning* dari delapan merek produk AMDK terhadap lima variabel (kualitas produk, fitur produk, desain kemasan produk, harga produk dan merek produk). *Positioning* dalam penelitian ini menggunakan metode *Multidimensional Scalling* yang akan menghasilkan *perceptual map*. Melalui *perceptual map* yang dihasilkan dapat diketahui keunggulan dan kelemahan atribut yang dimiliki oleh Tirta One serta untuk mengetahui pesaing terdekat dari Tirta One yang berada di kuadran atau wilayah yang sama.

Rekomendasi yang diusulkan pada penelitian ini berdasarkan atribut yang menjadi kelemahan Tirta One, serta atribut tersebut dapat menunjang tujuan *positioning* dari Tirta One.

**Kata Kunci:** *Positioning, Perceptual Map, Multidimensional Scalling, Produk AMDK*

#### ABSTRACT:

Today, the bottled water industry is developing rapidly in recent years. This development is characterized by the many of new brands which emerging and create competition in the AMDK industry to be very tight. PT. Global Syahid Internasional is one company that engaged in the bottled water industry by selling mineral water product with the brand of Tirta One. The company have carried on sales to several cities in West Java; Kuningan, Majalengka, Indramayu, Cirebon, Tasikmalaya, Tangerang, Jakarta and Bandung regency. However, total sales of Tirta One has not met sales targets that set by the company.

Related to that, it is necessary to do research about positioning in order to know the attributes that are the hallmark of Tirta One. Thus, these attributes can build the brand image of Tirta One and help companies execute promotional strategy to introduce Tirta One to the public in order to improve sales results.

Through this research, will be mapped positioning of eight brands of AMDK products to the five variables (product quality, product features, product packaging design, product pricing and product brands). Positioning in this study using Multidimensional Scalling that will generate perceptual map. Through the resulting of perceptual map, it is known advantages and disadvantages of attributes possessed by Tirta One as well as to find out the closest competitor of Tirta One that is in same quadrant or region.

Recommendations that proposed in this study was presented based on the weakness attributes of Tirta One, as well as these attributes can support the positioning goal of Tirta One.

**Keywords:** *Positioning, Perceptual Map, Multidimensional Scalling, AMDK Product*

## 1. Background

Water is a basic requirement for living things, whether plants, animals and humans. Water in the human body have some function to maintain metabolic balance, dissolve and process the nutrients that are easily digested by the body. Most cell components in the human body consist of water. So, if the body has water shortage, it can caused the body does not function properly. Thus, every human being is recommended to meet the needs of the body to consume about 2 liters of water per day. It aims to maintain health and support the activities that performed by the body.

The importance of drinking water as supporting the health and activity of the body making the people aware to fulfill those needs wherever they are. Thus, this could be an opportunity for companies to produce Bottled Drinking Water (AMDK). Drinking water may be the best alternative for the people to meet the body's need for water to drink because the product is practical, and easily obtained and taken anywhere.

According to Hendro Baroeno who served as Chairman of the Association of Indonesian Bottled Drinking Water (Aspadin), that the main factors that influence the development of this industry is the growing number of people in Indonesia that continues to increase. In addition, the increase in bottled water consumption is also driven by the trend of people's lifestyles who want all practical without having to boil water (Mahadi, 2013).

The social demand for bottled water products continues to increase significantly. Increased need for bottled water products by the people of Indonesia in 2013 - 2015 can be seen in Figure I.1. Aspadin said bottled water consumption grew 12.5% per year during 2009 - 2014. In 2009, the sales volume of 12.8 billion liters of bottled drinking water and increased to 23.1 billion liters in 2014. Until the first quarter of 2015, sales of bottled water has reached 5.8 billion liters.

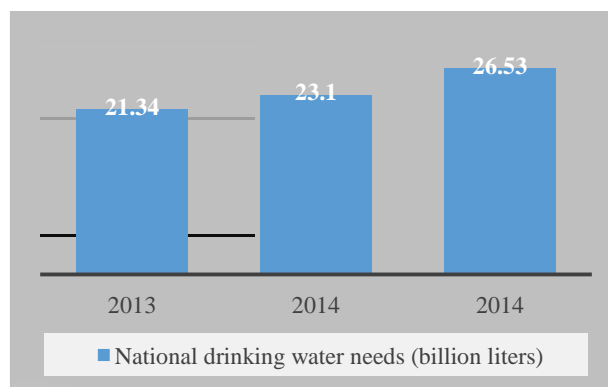


Figure I.1 National Drinking Water Needs  
(Source: Aspadin, 2015)

Today, the bottled water industry is developing rapidly in recent years. This development is characterized by the many new brands are emerging and create competition in the drinking water industry to be very tight. Based on data provided by Aspadin, there are currently around 500 companies engaged in the drinking water industry.

PT. Syahid Global International is one company that is engaged in the drinking water industry by selling mineral water with the brand Tirta One. Tirta One manufactured using high quality filtration machine and produce pure drinking water (TDS zero) is healthy because it contains Bio Energy Hexagonal. TDS (Total Dissolve Solid) is the amount of dissolved solids in water. The solid is usually in the form of minerals, some of which are harmful to the human body. Bio Energy Hexagonal contains high oxygen needed by every cell in the human body. Therefore, Tirta One is a healthy drinking water because it contains oxygen that can help fulfill the intake of oxygen in the body. The company aims to position Tirta One as a product of healthy drinking water without the inorganic mineral content with a cheap price so it can be reached by various circles of society. Until now, PT. Global Shaheed International has sold to several cities in West Java; Kuningan, Majalengka, Indramayu, Cirebon, Tasikmalaya, Tangerang, Jakarta and Bandung regency.

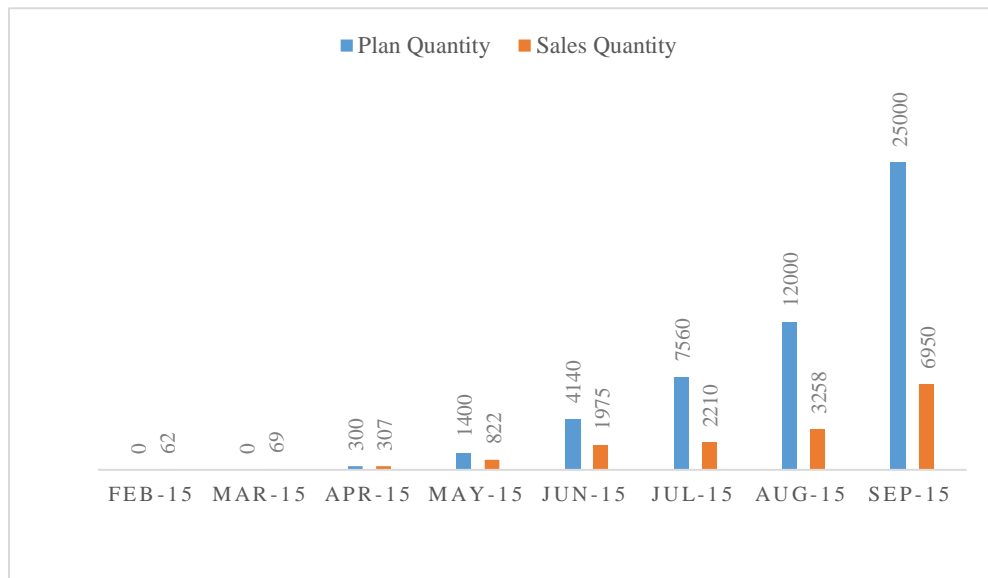


Figure I.2 Product Sales of Bottled Water “Tirta One”  
(Source: Product Sales Data of bottled water "Tirta One")

Based on Figure I.2, sales data bottled water products produced by PT. Syahid Global International not meet the sales targets. Thus, to increase product sales, PT. Syahid Global International plans to focus on developing markets in West Java, especially Bandung regency. In addition, one of the company's strategy to increase sales with promotions of products was aimed at introducing Tirta One to the public.

Based on strategies implemented by the company, the preliminary survey conducted in this research were put through observation and interviews to people who are in Bandung regency, especially districts Baleendah and Dayeuhkolot. Based on a survey that has been done, there are several competitors of Tirta One bottled water products in target markets are in the district of Bandung, namely; AQUA, Ades, VIT, Club, Amidis, Nestle, Le Minerals. In Table I.1 shows the seven brands of bottled water products are a competitor of Tirta One along with the tagline of each brand.

Table I.1 Brand List of AMDK Product

Brands of AMDK Product	Tagline
<b>AQUA</b>	“Ada AQUA?”
<i>Club</i>	“Welcome to your Club”
<b>VIT</b>	“Selalu ringan, selalu VIT!”
<b>Ades</b>	“Langkah kecil memberikan perubahan”
<i>Nestle Pure Life</i>	“The Water for Active People”
<i>Le Mineral</i>	“Beda segarnya, bukti terlindung mineralnya”
<b>Amidis</b>	“Pure Water Natural Life”
<b>Tirta One</b>	<b>Does not have tagline</b>

In this study conducted a preliminary survey of the 30 respondents who are consumers of bottled water products. One of the purposes of a preliminary survey was to determine the public perception of the difference Tirta One with other bottled water products. The results of a preliminary survey that has been done can be seen in Figure I.3.

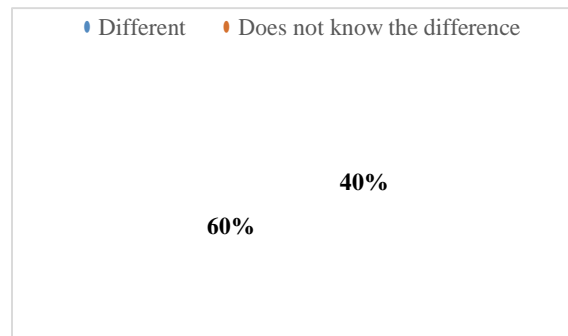


Figure I.3 Public Perception of Tirta One

Based on Figure I.3 known that Tirta One is not known by the public. This is shown by the large number of respondents who do not know the difference of Tirta One with other bottled water products that exist in the market. Differences owned by Tirta One compared with competitors in the bottled water industry was Tirta One has an oxygen content and does not contain inorganic mineral.

Based on the preliminary results of a survey that has been done, it can be concluded that there are still many people who do not know Tirta One. Thus, planning the strategy undertaken by the company is right, namely to carry out promotional activities to introduce Tirta One to the public.

According to Kotler and Keller (2009: 510), that the promotion was a variety of ways to inform, persuade and remind consumers directly or indirectly about a product or brand is sold. In conducting the sale, the company needs to inform the public about the advantages possessed by Tirta One. It aims to establish the image of Tirta One that occupies a distinctive position in the minds of the public.

According to Kotler and Keller (2006), positioning an act of designing an offer and the company's image or brand that occupies a distinctive position in the minds of its target customers. According Fandy Tjiptono (2008: 110), that positioning can be done based on the approach of the attributes of a product, ie associating a product with specific attributes, special characteristics, or the benefit to the customer. Therefore, further research is needed regarding the positioning for Tirta One.

## 2. Literature Review

### 2.1 Positioning

Positioning is one marketing strategy that must be implemented by all providers of goods or services. Positioning strategies can be interpreted as a selection of target market segmentation and showed a distinct advantage so as to control the competition in which the business (Doyle, 1998).

### 2.2 Perceptual Map

In the process of positioning performed by the company, it is required a deep understanding of positioning products that compete with one another. One way to understand this is by forming a grid positioning or perceptual map (Steenkamp et al, 1994 in Mullins et al, 2008).

### 2.3 Multidimensional Scalling

Multidimensional scaling is a procedure class to represent the perceptions and preferences of respondents spatially using visual appear (Malhotra, 2010: 349).

### 3. Research Methodology

The conceptual model is a picture that shows the mindset of looking at and solving a problem. In addition, the conceptual model is needed in order to research conducted become more structured. The conceptual model of this research can be seen in Figure III.1.

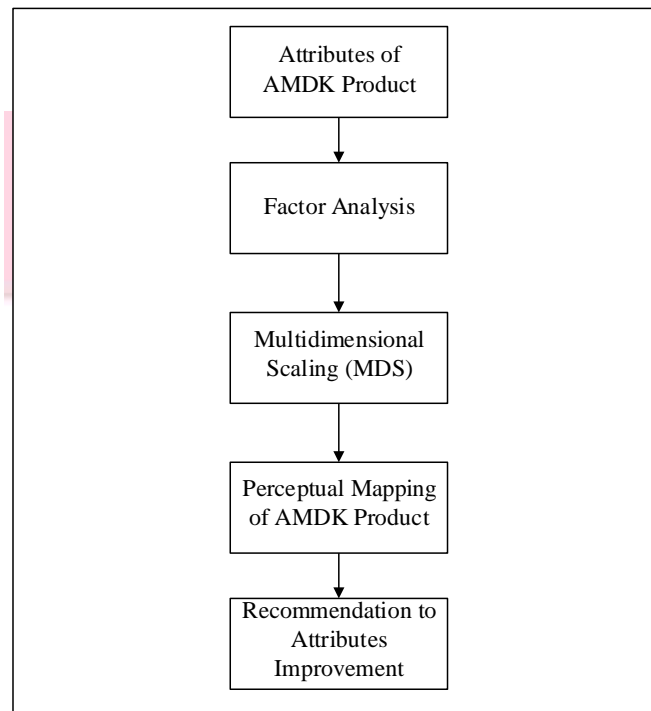


Figure III.1 Conceptual Model

Thing that need to be done in the first stage was to get the attributes of AMDK products based on previous research and interviews with respondents who are consumers of AMDK products.

Furthermore, the attributes of AMDK products that have been obtained will be the basis for preparing the preliminary questionnaire. The respondents assessment of the attributes used in the preliminary questionnaire will be processed using the method of factor analysis. The attributes on the preliminary questionnaire will be reduced so as to produce the most influential attributes of a product.

Then, the attributes that are output from the factor analysis will be the basis for developing a further questionnaire. The advanced questionnaire is respondents assessment of the level of conformity of a brand of AMDK products to the attributes in question. The conformity assessment level will be input data for Multidimensional Scaling (MDS).

Multidimensional scaling (MDS) will produce output in the form of a perceptual map that illustrates the brand competition in the industry of AMDK products and coordinate points of each attribute.

Recommendation of attribute improvements was aims to provide feedback to the company so Tirta One to be superior on that attribute. Thus, these attributes can be brand image of Tirta One and to support promotional activities undertaken by the company.

### 4. Research Discussion

#### 4.1 Data Processing of Preliminary Questionnaire

Attributes that are used in the preliminary questionnaire based on the results of interviews and previous research. The number of attributes contained in the preliminary questionnaire was 24 attributes consisting of five variables: the quality of products, product features, packaging design of product, product pricing and product brands. The results of the preliminary questionnaire in the form of attributes that have been reduced by the number of attributes to 19 attributes. Results of a preliminary questionnaire serve as inputs to further questionnaires.

#### 4.2 Data Processing of Further Questionnaire

Design of the further questionnaire was designed based on the output of processing data from preliminary questionnaire. Information that generated through the further questionnaire was in the form of respondent assessment of AMDK products based on the brand attributes that previously have been identified using a measurement of likert scale. The data have been obtained from the further questionnaires will be processed using multidimensional scaling

method. In this further questionnaire will produce results in the form of brands that superior on every attribute and brand of mineral water is the main competitors of Tirta One.

**4.3 Data Analysis**

Information on the superior brand on each attribute, the closest competitor of Tirta One, and an overview of the competitive market of AMDK products can be identified through a perceptual map. Position the brand of AMDK products to the attributes that have been identified and the closest competitor of Tirta One can be known through calculation of euclidean distance.

**4.4 Perceptual Map of AMDK Products**

Based on the calculation euclidean distance and the resulting perceptual map, it can be seen that the Tirta One is in the same region with Amidis, both brands were compete with each other. At this time, the two brands have the same advantages on the attributes of healthy mineral water content (having normal pH, TDS levels are low and do not have an inorganic mineral content) and price its products more economical than other brands.

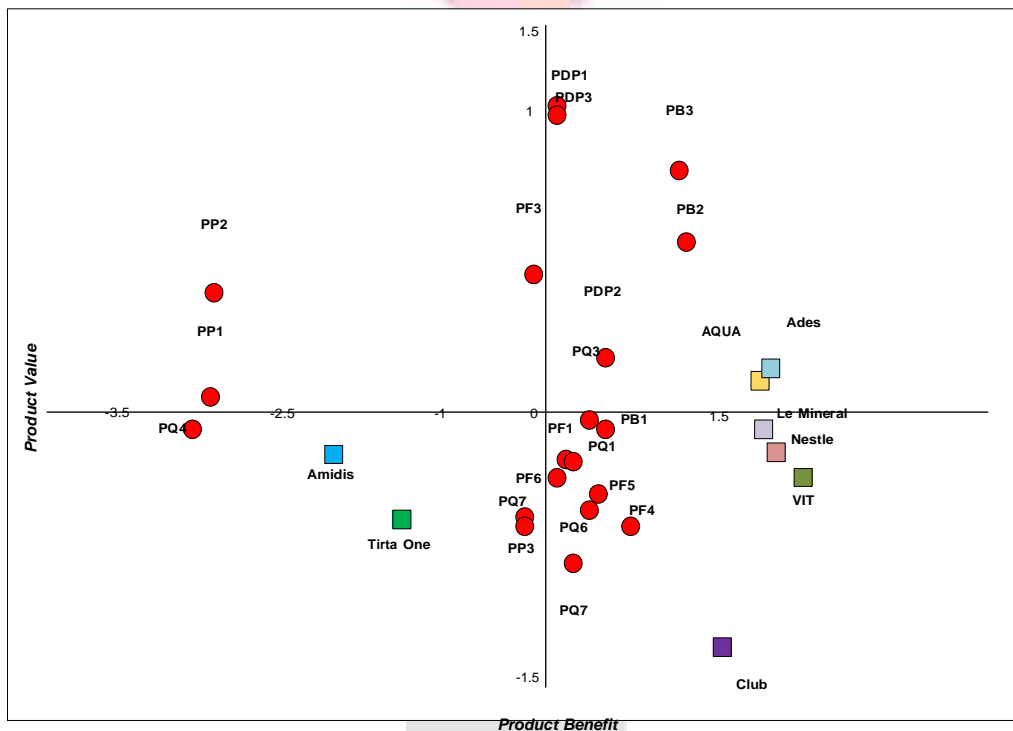


Figure IV.1 Perceptual Map of AMDK Products

**4.5 Analysis of Advantages Attributes of AMDK Product**

At this stage, an analysis to attributes that are the hallmark of Tirta One. The analysis was conducted based on the ratings that obtained by Tirta One in every attribute of AMDK products. Ranking and euclidean distance values of Tirta One on each attribute of AMDK products are used in perceptual mapping was presented in Table IV.1.

Table IV.1 Rank and Euclidean Distance Values of Tirta One on Each Attribute

Variable	Attributes Code	Euclidean Distance	Rank
Product Quality	PQ1	1,50	4
	PQ3	1,58	5
	PQ4	2,00	2
	<b>PQ6</b>	<b>1,39</b>	<b>1</b>
	<b>PQ7</b>	<b>1,21</b>	<b>1</b>
Product Feature	PF1	1,48	4
	PF3	1,85	6
	PF4	1,58	5
	PF5	1,50	6
	<b>PF6</b>	<b>1,40</b>	<b>1</b>

Table IV.1 Rank and Euclidean Distance Values of Tirta One on Each Attribute (Continuation)

Variable	Attributes Code	Euclidean Distance	Rank
Packaging Design of Product	PDP1	2,39	7
	<b>PDP2</b>	<b>1,39</b>	<b>1</b>
	PDP3	2,39	7
Product Pricing	PP1	1,97	2
	PP2	2,20	2
	PP3	1,44	4
Product Brand	PB1	1,60	5
	PB2	2,41	7
	PB3	2,51	8

#### 4.6 Improvement Analysis of The Attributes of AMDK Product

This stage analyzes the attributes of Tirta One priority that to be improved. The provisions attributes that became priority will be analyzed by comparing the value of the distance euclidean owned by Tirta One with competitors that compete directly. Based on previous analyzes have known that Amidis is the main competitor of Tirta One. Comparison the value of euclidean distance to each attribute of AMDK products between Tirta One and Amidis was contained in Table IV.2.

Table IV.2 Comparison of Euclidean Distance Values of Tirta One and Amidis

Variable	Attributes Code	Tirta One	Amidis	Difference in Value
Product Quality	PQ1	1,46	1,69	0,21
	PQ3	1,58	1,75	0,17
	PQ4	<b>2,00</b>	<b>1,51</b>	<b>-0,49</b>
	PQ6	1,39	1,44	0,05
	PQ7	1,21	1,47	0,26
Product Feature	PF1	1,48	1,69	0,20
	<b>PF3</b>	<b>1,85</b>	<b>1,75</b>	<b>-0,04</b>
	PF4	1,58	1,51	0,30
	PF5	1,50	1,44	0,27
	PF6	1,40	1,47	0,22
Packaging Design of Product	<b>PDP1</b>	<b>2,39</b>	<b>1,68</b>	<b>-0,12</b>
	PDP2	1,39	1,81	0,05
	<b>PDP3</b>	<b>2,39</b>	<b>1,77</b>	<b>-0,11</b>
Product Pricing	<b>PP1</b>	<b>1,97</b>	<b>1,48</b>	<b>-0,49</b>
	<b>PP2</b>	<b>2,20</b>	<b>1,65</b>	<b>-0,55</b>
	PP3	1,44	1,72	0,28
Product Brand	PB1	1,60	1,79	0,19
	PB2	2,41	2,43	0,02
	<b>PB3</b>	<b>2,51</b>	<b>2,50</b>	<b>-0,01</b>

#### 4.7 Basic Recommendation

At this stage will be conducted recommendations on Tirta One. Recommendations are given based on the analysis that has been done in the previous stage. Recommendations are given in the form of improvement position for Tirta One in the market of mineral products based on attributes that became the weakness of Tirta One and can promote the positioning goals of the company. The Company placed Tirta One as healthy drinking water without inorganic mineral content with cheap price, so it can be reached by various circles of society. Based on the analysis, there are three attributes that are a priority to do repairs to Tirta One. The attributes contained in Table IV.3.

Table IV.3 Priority Attributes Improvement of Tirta One

Attributes Code	Attributes	Dimension
PP2	The price of mineral water products more economical than the other bottled water products	<i>Product Value</i>
PP1	The price of mineral water products according to the benefits that obtained	<i>Product Value</i>
PQ4	The content of mineral water that healthy when consumed	<i>Product Value</i>

After analysis of the purpose of Tirta One with attributes that represent them, there are three attributes that will be recommended to be improved. These three attributes, namely, PP2, PP1, and PQ4.

#### 4.8 Final Recommendation

Recommendations have been formulated in the previous stage will be submitted to the PT. Syahid Global International. It aims to find out the opinions and considerations of the company in implementing the purposed recommendations.

Table IV.4 Final Recommendation to Improve The Tirta One Attributes

Num	Attributes	Recommendation
1	The price of mineral water products more economical than the other bottled water products (PP2)	Companies need to establish the selling price for all agents and store.
2	The price of mineral water products according to the benefits that obtained (PP1)	On the label needs to be given information that Tirta One is hexagonal water. Example: On the label contained the phrase "Hexagonal Water without inorganic mineral" and the tagline "Keep Healthy With Pure Water"
3	The content of mineral water that healthy when consumed (PQ4)	Companies need to create marketing communications program to communicate the existence of the product, as well as the benefits and advantages of Tirta One. For example: make the company's website, product brochures, and others.

#### 5. Conclusions

Based on the research that has been done there are 19 attributes that will be used on a perceptual map to determine the position of the eight brands of mineral water products. Based on the resulting perceptual map, it is known that the main competitor of Tirta One is Amidis. It can be seen from the perceptual map available, both brands of mineral water are located in the same area and compete with one another. At this time, both brands have the same advantages on the attributes of healthy mineral water content (having normal pH, TDS levels are low and do not have an inorganic mineral content) and price its products more economical than other brands.

Recommendations are given in the form of improvement in the market position of Tirta One mineral products based on attributes that the weakness of Tirta One and can promote the goals of positioning the company. So there are three attributes that will be recommended to be improved. These three attributes, namely; the price of mineral water products more economical than the other bottled water products (PP2), the price of mineral water products according to the benefits that obtained (PP1), and the content of mineral water that healthy when consumed (PQ4).



## 6. Bibliography

- [1] Doyle, Peter, 1998. *Marketing Management and Strategy*. Second Edition. England : Pearson Education Harlow
- [2] Craven, David. W. and Piercy, Nigel F. 2003. *Strategic Marketing*. Seventh Edition. The McGraw-Hill Companies. Inc.
- [3] Kotler, Philip. 2006. *Marketing Management*. Twelveth Edition. Pearson Education International.
- [4] Mullins, John W. et. Al., 2008. *Marketing Management: A Strategic Decision-Making Approach*. Sixth Edition. The McGraw-Hill Companies, Inc.
- [5] Tjiptono, Fandy. 2008. *Strategi Pemasaran*. Yogyakarta : Andi
- [6] Kotler, Philip dan Keller, Kevin Lane. 2009. *Manajemen Pemasaran*, Jilid I, Edisi 13 (Terjemahan). Jakarta : Erlangga
- [7] Malhotra, Naresh K. 2010. *Riset Pemasaran*, Jilid 2. Edisi keempat. Diterjemahkan Oleh: Soleh Rusyadi Maryam. Jakarta : PT. Indeks. Edisi Keempat.
- [8] Kasali, Rhenald. 2007. *Membidik Pasar Indonesia (Segmentasi, Targeting dan Positioning)*. Jakarta : Gramedia Pustaka Utama
- [9] Schiffman and Kanuk, Lazar. 2000. *Customer Behaviour*. International Edition. Prentice Hall Inc.
- [10] Simamora, B. 2005. *Analisis Multivariat Pemasaran*. Jakarta : Gramedia Pustaka Utama
- [11] Malhotra, Naresh K. 2004. *Marketing Research: An Applied Orientation*. Fourth Edition. Pearson Education International.
- [12] Sekaran, U. 2003. *Research Methods for Business : A Skill Building Approach*. Canada : John Willey & Sons, Inc.
- [13] Ghozali, Imam. 2002. *Aplikasi Analisis Multivariat dengan Program SPSS*. Semarang : Badan Penerbit Universitas Diponegoro
- [14] Munir, Abdul Razak. 2005. *Aplikasi Analisis Faktor Untuk Persamaan Simultan dengan SPSS Versi 12*. Laboratorium Kompetensi Manajemen Fakultas Ekonomi UNHAS. Universitas Hassanudin.
- [15] Sugiono. 2009. *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Edisi ke-6. Bandung : Alfabeta
- [16] Gudono. 2011. *Analisis Data Multivariat*. Yogyakarta : BPFE-Yogyakarta
- [17] Konuk, F. A. dan Altuna, O. K. 2011. *Brand Positioning Through Multidimensional Scaling: A Study in The Turkish Market Shampoo*. International Journal of Human Social Sciences and Humanity Studies. Vol 3, No 2, 2011 ISSN: 1309-8063
- [18] Kara, A. dan Kaynak, E. 2008. *Positioning of Fast-Food Outlets in Two Regions of North America*. A Comparative Using Correspondence Analysis, Journal of Professional Services Marketing, 14:2, 99-119
- [19] Hermawan, E.Y. 2008. *Analisis Preferensi Pengunjung dan Positioning Pusat Perbelanjaan Modern di Kota Bogor*. Tugas Akhir Fakultas Ekonomi dan Manajemen. Bogor : Institut Pertanian Bogor
- [20] Resfani, D. 2013. *Analisis Kepuasan Konsumen dan Positioning Produk Waralaba Teh Instan (Studi Kasus: Es Teh Poci)*. Tugas Akhir Fakultas Ekonomi. Depok : Universitas Indonesia
- [21] Akhmad, F. 2012. *Analisis Positioning Layanan Televisi Berbayar Groovia TV Berdasarkan Perceptual Mapping dengan Metode Multidimensional Scaling di Kota Jakarta*. Tugas Akhir Fakultas Teknik Industri. Bandung: Universitas Telkom
- [22] Widjaja, R. dan Kunto, S. Y. 2014. *Analisa Persepsi Konsumen Tentang Atribut Produk AMDK*. Jurnal Pemasaran Petra. Vol.2, No.1, 2014, 1-8
- [23] Mahadi, T. 2013. *Konsumsi AMDK Naik 11%*. Available at: <http://industri.kontan.co.id/news/kuartal-iii-2013-konsumsi-amdk-naik-11>. (Accessed 13 November 2015)
- [24] Indonesia Finance Today, 2013. *Persaingan di Industri Air Minum Dalam Kemasan Kian Ketat*. Available at: <http://www.ift.co.id/posts/persaingan-di-industri-air-minum-kemasan-kian-ketat>. (Accessed 13 Desember 2015)
- [25] Sales Report of PT. Syahid Global Internasional, 2015
- [26] Research Data About The Water Quality of Tirta One, PT. Syahid Global Internasional, 2015
- [27] amidiswater.com. 2016. *Kualitas Air Amidis*. Available at: <http://amidiswater.com/quality/index>. (Accessed 25 Mei 2016)