

The Value of Innovation in Tobacco Processing Products: An Evidence from Bandung E-Cigarette Industry

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Abstract

This research analyzed Tobacco Processing Products (HPTL) industry and its value of innovation using dimensions of innovation approach. We used qualitative method with interviews, documentation, and observation as the data collection techniques. Later on, we employed several business strategies tools: IFE, EFE, CPM, SFAS, SWOT, SPACE, IE, Grand Strategy, and QSPM. We found out that innovation strategy for tobacco processing products lied on the product innovation, especially in the taste of liquid vape products. Furthermore, by investing in the process innovation, especially in equipment and supplies, is key to develop sustainable product innovation.

Keywords: *Innovation; Liquid Vape; Product Development; Tobacco Processing Products; Strategy*



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INTRODUCTION

Although being an excel in increasing its user in Indonesia (Rizqi, 2020) due to some its heathier feature than traditional cigarette (Gite Petit, 2020), the electronic cigarette/vape/e-cigarette businesses must innovate to keep increasing their sales. According to Fontana (2011), innovation is the process of developing and introducing new products/systems that bring success to the company. But in fact, not all businesses can do this. There are still businesses that are stuck in the "success trap", which is feeling satisfied and trying to keep doing what was successful or successful in the past rather than developing following the changing times or consumer desires (Arussy, 2015).

Permana (2019) underlined that business innovation is a change in a company with the intention to improve the company's performance. Business innovation is an absolute thing and must be done by a business for its sustainable survival among the increasingly fierce competition. The possible aspects for innovation include products, marketing, consumer management, and services. Our experiences showed that the advanced and developing companies are those that are able to keep on innovating in their business. Therefore, it is clear that this industry requires high product innovation to attract its target market, namely e-cigarette users. The intense competition makes the company have to be able to think quickly and accurately in product innovation. Several well-known liquid vape companies, include PT. Indo Rasa Karunia, PT. Asia Vaporido Berjaya, CV. Limousine, CV. Khalifah of Brothers, CV. Beladera Liquindo, and others.

We carried out AR Brew as a case study in this research. AR Brew is a company that produces various kinds of liquids for e-cigarettes that has been established in Bandung since December 2018. We want to analyze what kind of innovation strategies that already done by AR Brew and the value of it based on the dimensions of innovation.

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LITERATURE REVIEW

Innovation is a key activity for the progress of society in various aspects. Sadik (2016) examine the impact of national culture and globalization on consumer value and the related WTP for technological innovations. Research found that there is significant difference between the WTP for high-tech innovations of French and German consumers. Another research conducted by Hilman & Kaliappen (2015), testing the linkage between innovation strategies (process innovation and service innovation) and organizational performance in the context of Malaysia hotel industry. Research found the innovation strategy, both process innovation and service innovation, has a significant effect on organizational performance in the context of the Malaysian hospitality industry.

Hsu (2011) examined Taiwanese computer and electronics firms to explore the product marketing strategies they adopted to deal with global competition. The design strategy adopted by companies in the market leader group includes aggressive innovation in product design; adopted by companies in market focus groups that focus on innovation in product design; those in the market challenge group demonstrated a strong integration of innovation in product design. Another study from Kogabayev & Maziliauskas (2017) defined the different models, classifications and definitions of innovation. They found that different types of innovation have their own characteristics development, implementation and dissemination, require specific management approaches, the relevant structures of innovation, its techniques and styles.

Detect and uncover the implication of innovation management with the derivation of competitive advantage also studied by Osenieks & Babauska (2014) that found the practical implementation of innovation policy in Latvia is slow that does not reflect sustainability in innovation performance and as the complexity of innovation has increased by the growth in the amount of knowledge available to organizations.

These previous studies in innovation field has a different argument and perspectives in different scale, either in company, organization, or consumer. However, we can clearly see that innovation is not an activity that can be generalized to a business entity. Innovation will depend on the characteristics of the business and the external aspects that influence it, so that it can become a strategy that strengthens overall business excellence. We found that Hsu (2011) underlines similar characteristics with e-cigarette industry that highlighted product innovation as one of the most important part in innovation process.

Several previous researchers who see innovation as an important activity in business progress are summarized in the following Table 1.

Table 1. Previous Research

Title	Willingness to pay for innovations: An emerging European innovation adoption behaviour	Innovation Strategies and Performance: Are They Truly Linked?	Design Innovation and Marketing Strategy in Successful Product Competition	The Definition and Classification of Innovation	The Relevance of Innovation Management as Prerequisite for Durable Existence of Small and Medium Enterprises
Author(s)	Orsolya Sadik-Rozsnyai	Haim Hilman &	Yen Hsu	Timur Kogabayev	Janis Oseieks, Santa Babauska

		Narentheren Kaliappen			
Year	(2016)	(2015)	(2011)	(2017)	(2014)
Aim	Examine the impact of national culture and globalization on consumer value and the related WTP for technological innovations.	Test the linkage between innovation strategies (process innovation and service innovation) and organizational performance in the context of Malaysia hotel industry.	Examine Taiwanese computer and electronics firms to explore the product marketing strategies they adopted to deal with global competition	Define the different models, classifications and definitions of innovation	Detect and uncover the implication of innovation management with the derivation of competitive advantage
Variables	Innovation, Globalization, National culture, Willingness to pay	Innovation Strategy, Performance.	Product design, Innovation, Marketing strategy, Computers, Electronics industry	Innovation, economic efficiency; investments	Innovation management; competitive advantage; globalization; European Union; Latvia; small and medium sized enterprises
Methods	Quantitative	Quantitative	Quantitative	Qualitative	Quantitative
Result	There is significant difference between the WTP for high-tech innovations of French and German consumers.	The innovation strategy, both process innovation and service innovation, has a significant effect on organizational performance in the context of the Malaysian hospitality industry.	The design strategy adopted by companies in the market leader group includes aggressive innovation in product design; adopted by companies in market focus groups that focus on innovation in product design; those in the market challenge group	Different types of innovation have their own characteristics development, implementation and dissemination, require specific management approaches, the relevant structures of innovation, its techniques and styles.	The practical implementation of innovation policy in Latvia is slow that does not reflect sustainability in innovation performance and as the complexity of innovation has increased by the growth in the amount of knowledge available to organizations.

			demonstrated a strong integration of innovation in product design.	
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RESEARCH METHOD

We use qualitative method to emphasize deep understanding of innovation in tobacco processing products industry. Sources of data in this research are primary and secondary data. Primary data obtained by conducting interviews and observations. Secondary data is obtained from company documents, such as company profiles.

The technique of selecting informants was purposive sampling technique. Purposive sampling technique use based on researcher consideration that informant is capable to give information based on the research topic (Sugiyono, 2012). The informant in this study was the vice president director of AR Brew.

The research method is carried out in stages starting with the determination of topics, data collection and analyzing data, also conclusion and recommendation.

AR Brew chosen since able to prove its work in the liquid vape industry with a wide variety of flavors. In addition, AR Brew is also one of the main players in the growing liquid vape business in Indonesia, so it can be a case study in terms of innovation.

Validity and reliability testing in this study uses a number of tests, including credibility, transferability, dependability, and confirmability (Sugiyono, 2018). Credibility test is carried out by extending observations and triangulation of techniques. Transferability test allows for the application of innovation strategies by tobacco processing products under conditions similar to AR Brew. Dependability test is carried out by a research audit process which is carried out continuously from beginning to end with documentation of the interview and observation process. Confirmability test is carried out by ensuring that interviews and observations are carried out according to the established study protocols.

Research analysis divided into 2 phases namely internal and external environmental analysis and strategic planning stage for analyzing the development of the dimensions of innovation. We use several analysis tools as in the table below to make it easier and help our analysis process more effectively in accordance with the data obtained from the company we studied.

Table 2. Research Analysis Tools

Internal and External Environmental Analysis	Strategic Planning Stage
<p>Internal</p> <ul style="list-style-type: none"> - Production - Marketing - Human Resources - Finance <p>External</p> <ul style="list-style-type: none"> - Porter’s Five Forces - PESTLE 	<ul style="list-style-type: none"> - External Factor Evaluation (EFE) Matrix, - Internal Factor Evaluation (IFE) Matrix - Competitive Profile Matrix (CPM) - SWOT Matrix - Internal-External (IE) Matrix - SPACE Matrix - Grand Strategy Matrix - QSPM Matrix

FINDINGS AND DISCUSSION

Our internal analysis, from the points of view of production, marketing, human resource, finance are described below:

Production

AR Brew prioritizes the best quality from a high level of cleanliness and quality control to maintain the stability of the taste of each product. All employees must wear tools and equipment in accordance with the SOP (Standard Operating Procedure) complete with clothes, gloves, and headgear for double protection due to direct contact with all kinds of ingredients, including chemicals compound.

The production capacity is 3,000 bottles in one day using two machines. However, the average production is 1,000 to 2,000 bottles per day using one machine in the process. AR Brew creates the best layout that can achieve optimal effectiveness namely adjacent spaces and sequences according to the stages. Starting from the goods that enter the warehouse from the supplier, processed, and up to the packaging process.

Marketing

AR Brew collaborates with several well-known buzzers and special reviewers of liquid vape. Meanwhile for offline marketing, AR Brew usually participates in vape events, such as Invex (Indonesia Vape Expo). Invex is an international electric cigarette exhibition based in Yogyakarta, Indonesia. AR Brew also built good relationships with communities in Indonesia by sponsoring their birthday events. The approach taken is sufficient to have a positive impact on the company.

STP (Segmenting, Targeting, Positioning) carried out by AR Brew are as follows:

- Segmenting

Segments in e-cigarette industry are required to be 21 years and above. From geographic segmentation, AR Brew chose to focus on the market in Indonesia with dominant sales in Kalimantan. In terms of demographic segmentation, adult men who like to try new things and have a high curiosity.

- Targeting

Target market for AR Brew is men, especially those who have had a history of being active smokers before and women who have a hedonistic lifestyle, such as clubbing, and also women who have male characters known as tomboy. Besides that, it is also in women whose dominant environment is surrounded by men, especially those who are also smokers. The target market is those aged 21 years and over with middle and upper economic status.

- Positioning

AR Brew tries to build its product image as a premium and exclusive product in its market.

We also analyzed the marketing using the 4P marketing mix, including:

- Product

Products manufactured by AR Brew are special liquids for e-cigarettes that have a variety of flavors. Some of the products produced follow the increasing market demand, but not all trends are followed by AR Brew because of several considerations. Like in 2020, it is currently viral on social media, namely Mang Ole odading. Several other manufacturers of the same type make these flavors for e-cigarette lovers to enjoy, but AR Brew chose not to take this opportunity as it was considered unsustainable for the long term and the risk of possible deadstock was high.

- Price

The price of the products offered by AR Brew is quite high in the industry. However, the price given

by AR Brew to its distributors has a prior agreement with a special price. Meanwhile, the retail price is regulated by the distributors directly. So, for e-cigarette industry, there is a long price chain from the moment the product leaves the factory and reaches the consumer.

- Place

AR Brew has an office and e-cigarette liquid production located in Bandung. Meanwhile, sales are carried out online and also through distributors in several regions, one of which is the largest on Kalimantan. The distributors supply AR Brew products to several of their trusted vape shops in their respective regions. Distributors owned are still quite few, so that the distribution is not comprehensive throughout Indonesia.

- Promotion

Promotions conducted by AR Brew are divided into online and offline promotions. For online promotion, AR Brew takes advantage of current technology by using social media as a way of approaching its target market. Some of them are collaborating with this well-known figure in the field of e-cigarettes, whose reviews of various e-cigarette liquid products. For promotions on price aspects, such as discounted prices and cashback is rarely done because considering this can have a negative impact on its distributors, they also have a special agreement between company and the distributor.

In offline promotions, AR Brew often participates in vape events, such as Invex. In these events, AR Brew opened its own booth and provided some of the best offers for its potential customers as well as providing door prizes for their lucky customers. In addition, AR Brew is often a sponsor for a vape community's birthday by gave e-cigarette fluid samples to all the guests.

Human Resources (HR)

AR Brew is a relatively young business because it was only established at the end of 2018. The human resources (HR) owned by the company currently total 10 people. The process of selecting prospective employees lies in its character, who is disciplined, thorough, responsible, always willing to learn, and able to maintain cleanliness. Small team make it easy to identify whether if there is a decrease or increase in the performance of each employee.

The special experience required to the administration division, because the HPTL (other tobacco processing product) industry or more precisely known as e-cigarette liquid is still relatively new. The number of new regulations, especially on customs, and the strictness of these regulations require a lot of precision. If something goes wrong, such as in careless recording, the company will be faced with even more legal problems.

Company certainly teaches its employees who are involved in the production process from the start and includes guidance. They are given training in operating specific applications. This application was created to facilitate the operational process and company monitoring. The company brings in special trainers from outside the company to be able to provide training about the applications they are using. In addition, the company also provides training to employees who are directly involved in the production process directed by the director. The director of AR Brew also directs how to maintain computers, machines, and other things in the company.

Finance

AR Brew is family company because the capital invested comes from family members. AR Brew's revenue comes from the sale of their product. Besides that, sometimes company also resells excess raw materials that are not used by it and gets a little more from the sale than those who need the ingredients. We also do the external analysis to Porter's Five Forces, which will analyze Threat of New Entrants, Bargaining Power of Buyers, Bargaining Power of Suppliers, Threat of Substitute Products, and Rivalry Among Existing Competitors.

Porter's Five Forces

1. Threat of New Entrants

Entering e-cigarette industry is quite difficult, because in addition to some difficult regulations and a fairly high level of capital, special skills are needed in making products for the electronic cigarette. Company also needs to attract distributors to cooperate. High quality and innovative products needed to attract attention and interest of distributors. E-cigarette users will choose product based on quality, hygiene, and competitive price.

2. Bargaining Power of Buyers

There are quite a lot of e-cigarette users in Indonesia, but there are also many similar e-cigarette products. Based on interviews, consumer power is quite high. There are many choices for e-cigarette liquids, both in terms of taste and price. However, AR Brew always strives to create innovative flavors to attract consumers to buy with competitive prices in its market segment.

3. Bargaining Power of Suppliers

AR Brew has many suppliers who can provide everything they need at any time. Therefore, AR Brew's strength is greater than its suppliers. AR Brew can conveniently compare prices, quality, and desired delivery times from multiple suppliers. The relationship between them is still going well until now.

4. Threat of Substitute Products

AR Brew is very confident that its replacement products on the market will not have a significant impact on the company. Because there is a sense of dependence or can be called addiction to the product they create. Smokers tend to find it difficult to quit or switch to another product when they feel comfortable with the product. Threat from substitute products is very small. Although there is a possibility that the substitute product is conventional cigarette, each has different characteristics.

5. Rivalry Among Existing Competitors

There are not many AR Brew competitors in Indonesia because this industry is still relatively new. They are PT. Indo Rasa Karunia, PT. Asia Vaporido Berjaya, CV. Limousine, CV. Caliph of Brothers. However, all companies in e-cigarette industry have good relationships with each other so that competition is healthy and fair. AR Brew and its competitors support and help each other, for example in need of certain raw materials then the other will help if they have excess raw materials.

Further, we extend the external analysis to SWOT analysis below.

SWOT Analysis

The following is a SWOT analysis based on the results of interviews with related parties.

Table 3. SWOT Analysis

	Favorable	Unfavorable
	Strengths	Weaknesses
Internal	<ul style="list-style-type: none"> - Varied taste - Cleanliness in the production process - Sophisticated engine 	<ul style="list-style-type: none"> - Promotion - Distribution - Cost limitation

	- Special application for companies	
External	Opportunities	Threats
	- Customs tariff increase on conventional cigarette - Change in smoking experience behavior - The population and purchasing power of the Indonesian people are high	- The similarity of the product name or taste - Changes in government regulations

We used fishbone diagram as a part of our external analysis below to outline cause and effect in innovation constraints for AR Brew.

Fishbone Diagram

Fishbone diagram is a medium that can be used to identify a relationship between cause and effect in order to find out the main cause of the problem that occurs. The following is a fishbone diagram of the AR Brew company's innovation strategy:

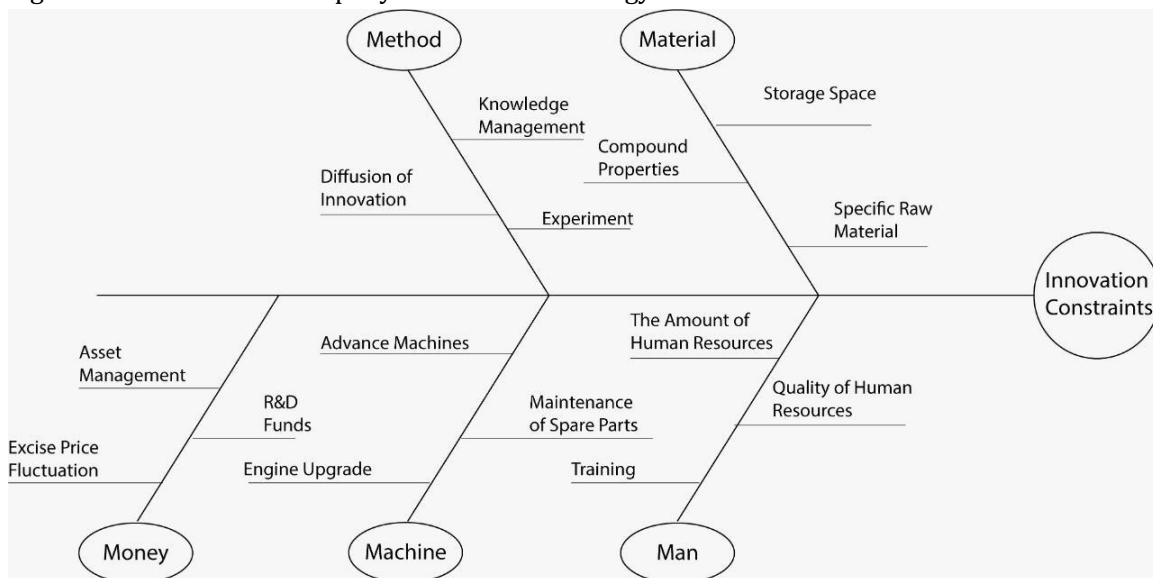


Figure 1. Fishbone Diagram

From Figure 1, it can be seen that the factors that can have a positive or negative impact on the final result are the innovation strategy at AR Brew. Explanation delivered in Figure 2.

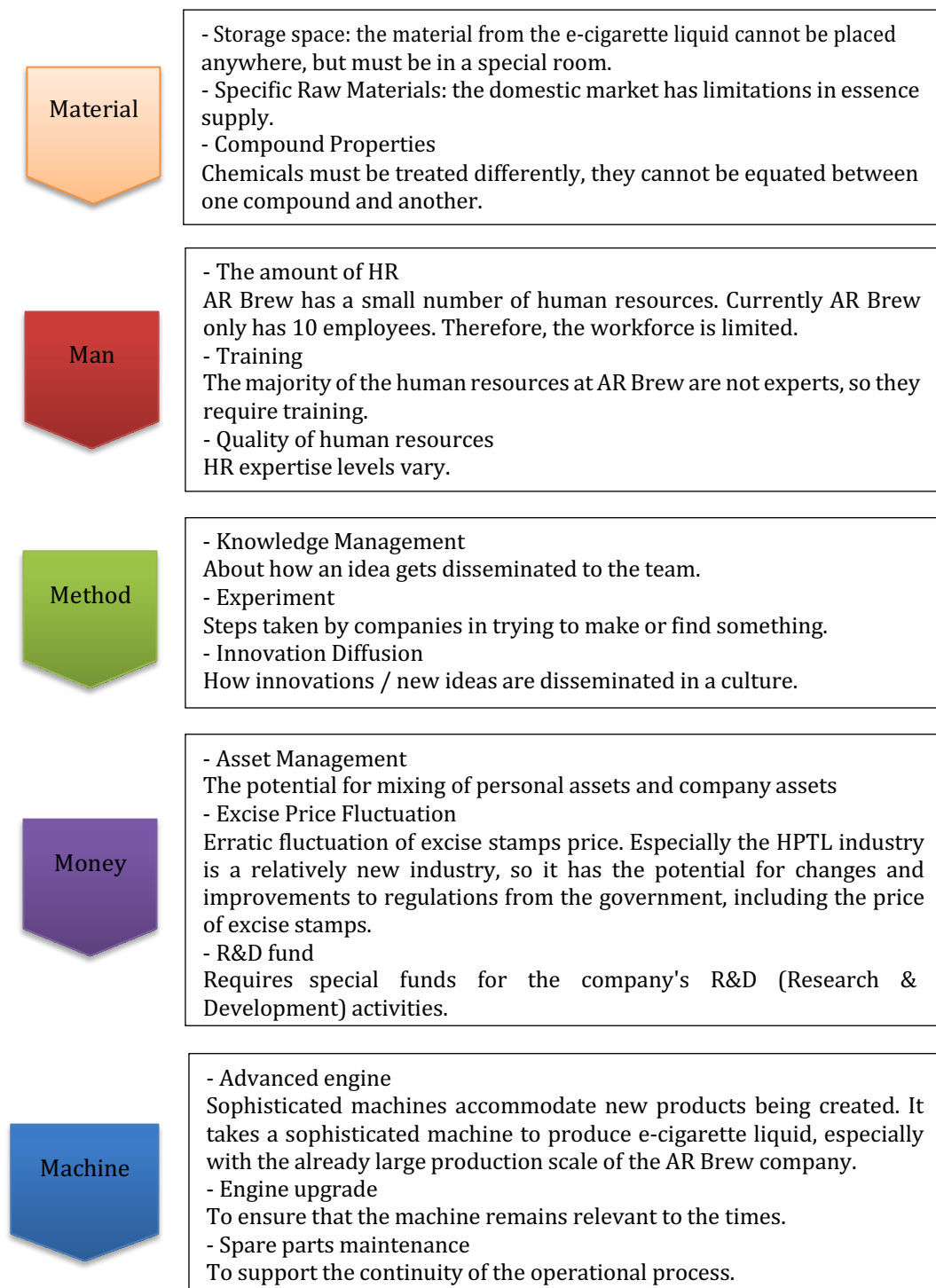


Figure 2. 5M of Innovation Strategy

We do the strategic planning stage with several tools analysis, such as External Factor Evaluation (EFE) Matrix, Internal Factor Evaluation (IFE) Matrix, Competitive Profile Matrix (CPM), SWOT Matrix, Internal-External (IE) Matrix, SPACE Matrix, Grand Strategy Matrix, QSPM Matrix.

The following is the Internal Factor Evaluation (IFE) Matrix, to analyze the strengths and weaknesses of the companies we studied:

Internal Factor Evaluation (IFE) Matrix

Here are the internal factors along with the weights and ratings for the strengths and weaknesses of the AR Brew company:

Table 4. IFE Matrix

IFAS		Weight	Rating	Weighted Score
Strengths				
S.1	Product taste	0.18	4	0.72
S.2	Production hygiene	0.12	3	0.36
S.3	State of the art machine	0.14	3	0.42
S.4	Compliance and accuracy of administration with Customs	0.08	2	0.16
S.5	Company Personal Application	0.12	3	0.36
Total Strengths		0.64		2.02
Weaknesses				
W.1	Promotion	0.08	3	0.24
W.2	Distribution	0.1	3	0.3
W.3	Cost limitations	0.18	2	0.36
Total Weaknesses		0.36		0.9
Total		1		2.92

Based on Table 4, the company's internal strength is superior with a score of 2.02 and its weakness is at a score of 0.9 with a total of both 2.92. So, it is clear that the company has a positive side, namely greater strength to beat all the existing internal weaknesses of the company. This is a good thing for all companies engaged in any field.

According to David (2009), no matter how many factors are included in the IFE matrix, the resulting total score ranges from 1.0 as the lowest and up to 4.0 as the highest score. A score far below 2.5 is a sign of a weak company internally. Conversely, if the score is far above 2.5 then it is a sign of a strong company internally. AR Brew got a total score of 2.92 which means that the internal conditions of the company tend to be strong.

Besides the IFE matrix above, we also analyzed using the EFE matrix as below:

External Factor Evaluation (EFE) Matrix

The following are external factors in the form of opportunities and threats to the AR Brew company along with the weight and rating for each factor.

Table 5. EFE Matrix

EFAS		Weight	Rating	Weighted Score
Opportunities				
O.1	Increase in cigarette excise rates	0.18	4	0.72
O.2	High purchasing power	0.14	3	0.42
O.3	The population of Indonesia is high	0.14	3	0.42
O.4	Indonesian government policy support	0.1	2	0.2
O.5	Consumers choose e-cigarettes because they have a wide choice of flavors	0.11	2	0.22
Total Opportunities		0.67		1.98
Threats				
T.1	Similarity in naming or taste	0.1	3	0.3
T.2	Competitors in similar industries with mature distribution channels	0.08	3	0.24
T.3	Government regulations	0.15	2	0.3
Total Threats		0.33		0.84
Total		1		2.82

From Table 5, it can be seen that AR Brew has a total score for the EFE Matrix of 2.82 with a chance of 1.98 and a threat of 0.84. Quite a significant difference between the two. However, it is the same as discussed in the previous IFE matrix, that regardless of the factors that are included in this EFE matrix the total score will range from 1.00 to 4.00 with an average of 2.5. Even though the score obtained by AR Brew has been above the 2.5 average, they still have to be able to take full advantage of the existing external opportunities and avoid all threats that can impact and affect the company.

After doing the analysis using the IFE matrix and the EFE matrix, then we get the SFAS as below.

Strategic Factor Analysis Summary (SFAS)

SFAS is used to summarize organizational strategic factors by combining external factors as listed in the EFE Matrix with internal factors in the IFE Matrix.

Table 6. SFAS Matrix

No.	SFAS	Weight	Rating	Weighted Score
1	Product taste	0.14	3	0.42
2	Production hygiene	0.09	1	0.09
3	State of the art machine	0.11	2	0.22
4	Promotion	0.1	2	0.2
5	Distribution	0.08	3	0.24
6	Cost limitations	0.09	3	0.27
7	Increase in cigarette excise rates	0.12	2	0.24

8	The population of Indonesia is high	0.08	1	0.08
9	Similarity in naming or taste	0.09	2	0.18
10	Government regulations	0.1	2	0.2
Total		1		2.14

From the Table 6, it can be seen that there are several summaries of the strengths, weaknesses, opportunities, and threats contained in AR Brew. This table was created to condense internal and external factors so that they can be used more effectively in a strategy.

The next stage of strategic planning that we do is to use the Competitive Profile Matrix (CPM).

Competitive Profile Matrix (CPM)

The HPTL (other tobacco processing product) industry, such as that being run by the AR Brew company, is still relatively new. However, AR Brew also has great competitors in its industry. The competitors that the researchers examined as comparisons were CV Khalifah of Brothers and Zaenal Vaporizer, as follows:

Table 7. CPM Matrix

Critical Success Factors	Weight	AR Brew (CV Beladera Liquindo)		Khalifah of Brothers (CV Khalifah of Brothers)		Zaenal Vaporizer	
		Rating	Score	Rating	Score	Rating	Score
Instagram visual concept	0.16	4	0.64	3	0.48	2	0.32
Distribution	0.11	2	0.22	3	0.33	2	0.22
Product Design	0.15	4	0.6	4	0.6	2	0.3
Product Quality	0.17	4	0.68	4	0.68	3	0.51
Price competitiveness	0.16	4	0.64	3	0.48	4	0.64
Advertising	0.12	2	0.24	3	0.36	2	0.24
Customer feedback	0.13	3	0.39	3	0.39	1	0.13
Total	1		3.41		3.32		2.36

Based on the Table 7, AR Brew excels with a difference of 0.9 points with Khalifah of Brothers and a difference of 1.05 points with Zaenal Vaporizer. We have these two competing companies to compare with AR Brew because they have the same location in Bandung. AR Brew has good factors at its disposal, but as can be seen above that they are weak at advertising. The factor that causes advertising has not been able to excel is due to limited costs.

We also use the SWOT Matrix in our strategic planning stage.

SWOT Matrix

The following are some of the internal factors such as the strengths & weaknesses of the company with external factors such as opportunities and threats along with the appropriate strategy for each paired internal and external factors

Table 8. SWOT Matrix

	Strengths - S	Weaknesses - W
	1. Product taste 2. Production hygiene 3. State of the art machine 4. Compliance and accuracy of administration with customs 5. Company personal application	1. Promotion 2. Distribution 3. Cost limitation
Opportunities - O	S & O	W & O
1. Increase in cigarette excise rates 2. High purchasing power 3. The population of Indonesia is high 4. Indonesian government policy support 5. Consumers choose e-cigarettes because they have wide choice of flavors	Creating flavors of new products that are popular all the time, in the form of candy or childhood snacks like Yupi, which are often consumed by all ages (S1, O5) Creating a taste of traditional Indonesian products (S1, O3) Maximizing machine functions in order to produce products for high capacity demands (S3, O2)	Making efforts to increase market share by cooperating with vape distributors throughout Indonesia (W2, O3) Conduct intensive promotions regarding e-cigarette liquid to attract new potential consumers and consumers of conventional cigarettes (W1, O1) Doing business expansion by working together by adding several investors to inject funds. Investors can come from the public or the government (W3, O3, O4)
Threats - T	S & T	W & T
1. Similarity in naming or taste 2. Competitors in similar industries with mature distribution channels 3. Government regulation	Double check the risk of accidental similarity (S1, T1) Continue to learn and find out about government policies that change from time to time, including on customs payments (S4, T3)	To intensify cooperation with distributors throughout Indonesia (W2, T2)

From Table 8, that there are several strategies that companies can implement in accordance

with internal and external factors. The essence of some of the descriptions above is a market penetration strategy and a product development strategy that can be carried out by the AR Brew company.

Furthermore, we also use the SPACE matrix to determine the company's strategic position.

Strategic Position and Action Evaluation (SPACE) Matrix

The SPACE matrix below consists of the company's internal and external strategic positions. The results listed are in accordance with the data obtained.

Table 9. SPACE Matrix

Internal Strategic Position	Ratin g	External Strategic Position	Ratin g
<i>Financial Position - FP</i>		<i>Stability Position - SP</i>	
Company Asset	5	Barriers to entry to the industry	-2
Profit margin	6	The HPTL industry competition is getting tighter	-2
Working capital	5	Technology changes	-4
		Inflation rate	-6
Average	5.33	Average	-3.5
<i>Competitive Position - CP</i>		<i>Industry Position - IP</i>	
Product quality	-1	Availability of resources	5
Competitive price	-2	Increase in market demand	5
Relationship with suppliers	-3	Product innovation	6
Customer preferences	-3	Industrial productivity level	5
Average	-2.25	Average	5.25

From the data above, it can be seen that the X axis and Y axis are as follows:

X axis = Average on CP + Average on IP

= (-2.25) + 5.25

= +3

Y-axis = Average on FP + Average on SP

= 5.33 + (-3.5)

= +1.83

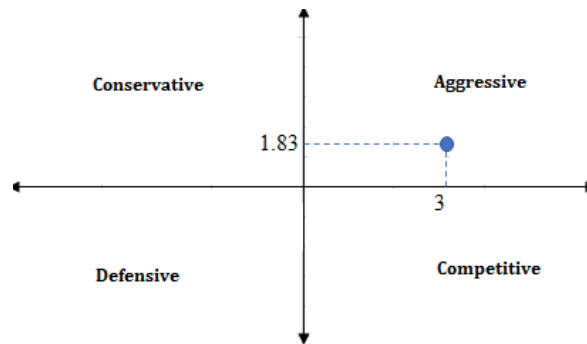


Figure 3. SPACE Matrix

From the Figure 3, it is known that the x-axis is 3 and the y-axis is 1.83. Therefore, it can be seen that the company is in the aggressive quadrant. Within this quadrant, the company is well positioned to use its internal strength. The right strategies that AR Brew can do include market development and product development. Market development can be done by entering other segments from the one AR Brew is currently working on, such as making products for the lower middle segment. Then product development can be done by creating new unique variants and developing technology so that product quality can be maintained.

Furthermore, the strategic planning stage uses the Internal-External (IE) Matrix in accordance with the results of the IFE Matrix and EFE Matrix above previously.

Internal-External (IE) Matrix

The results of the internal-external matrix analysis can be seen in Figure 4.

		<u>The IFE Total Weighted Score</u>		
		Strong 3,00 - 4,00	Average 2,00 - 2,99	Weak 1,00 - 1,99
<u>The EFE Total Weighted Score</u>	Strong 3,00 - 4,00	I	II	III
	Average 2,00 - 2,99	IV	V	VI
	Weak 1,00 - 1,99	VII	VIII	IX

Figure 4. IE Matrix

Based on the results of the IFE and EFE analysis, AR Brew got a score of 2.92 for internal factors (IFE) and 2.82 for external factors (EFE). These results indicate that the internal and external positions of AR Brew are moderate or average. In the Figure 5 above, it can be seen that AR Brew is in the number V quadrant, which is in a hold and maintain condition.

The strategies used for companies that enter quadrant number V are market penetration and product development strategies. Because in these conditions, the company is experiencing a period of growth and the best strategy for managing it is hold and maintain. In this case, it means that AR Brew is faced by several strategies as mentioned above that can be taken by the company.

We also use the Grand Strategy Matrix according to the results of the IFE Matrix and EFE Matrix to find out the right strategy for the company.

Grand Strategy Matrix

Internal factor evaluation and external factor evaluation are the basics used to determine the right business strategy using the grand strategy matrix method. The following is a grand strategy matrix based on the calculation of internal factor evaluation and external factor evaluation at AR Brew:

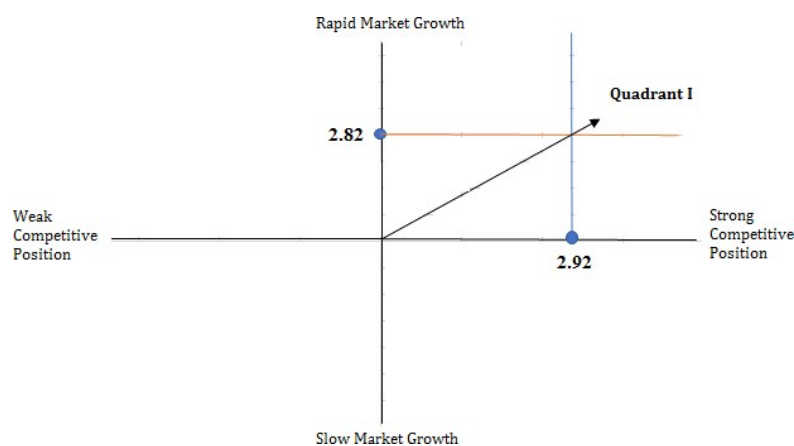


Figure 5. Grand Strategy Matrix

From Figure 5, it can be seen that the market growth and competitive position of AR Brew is high. So that the company is in the quadrant I position, which means that the company can get all the benefits that exist from its external opportunities. A suitable strategy to be applied in this condition is to use an aggressive growth strategy. Forms of strategy that can be used include market development, market penetration, product development, and others. If the company concentrates on the products it owns, then product development is the right strategy.

The last one at our strategic planning stage is the Quantitative Strategic Planning Matrix (QSPM) as below:

Quantitative Strategic Planning Matrix (QSPM)

Table 10. QSPM

Key Factors	Weight	Product Development		Market Penetration	
		Attractiveness Scores	Total Attractiveness Scores	Attractiveness Scores	Total Attractiveness Scores
Strengths					
Product taste	0.18	4	0	2	0
Production Hygiene	0.12	4	0	1	0
State of the art machine	0.14	3	0	1	0
Compliance and accuracy of administration with Customs	0.08	1	0	4	0
Company personal application	0.12	1	0	2	0
Weakness					
Promotion	0.08	2	0.16	4	0.32
Distribution	0.1	3	0.3	4	0.4
Cost Limitation	0.18	4	0.72	3	0.54
<i>Sum Weights</i>	1.00				
Opportunity					
Increase in cigarette excise rates	0.18	3	0.54	3	0.54
High purchasing power	0.14	3	0.42	4	0.56
The population of Indonesia is high	0.14	2	0.28	4	0.56
Indonesian government policy support	0.1	2	0.2	2	0.2
Consumers choose e-cigarettes because they have wide choice of flavors	0.11	4	0.44	1	0.11
Threats					
Similarity in naming or taste	0.1	4	0.4	2	0.2
Competitors in similar industries with mature distribution channels	0.08	3	0.24	4	0.32
Government regulation	0.15	2	0.3	3	0.45
<i>Sum Weights</i>	1.00				
Sum Total Attractiveness Score			4	>	4.2

From Table 10, it can be seen that of the two alternative strategies, the product development strategy is greater than the market penetration strategy with a total score for each strategy, namely 5.92 and 5.78. Therefore, the most potential strategy for AR Brew with all its internal and external factors is a product development strategy.

The value of innovation in AR Brew focusing on product and process innovation based on their core competencies. Development in terms of positional and paradigm innovation in tobacco processing products not yet conducted.

After the entire strategic planning stage with all the analysis tools we have used above, we can make a few summaries as in the table below.

Table 11. Summary Table

Strategic Planning Stage	Result
Internal Factor Evaluation (IFE) Matrix	Strength: product taste; production hygiene; state of the art machine; compliance and accuracy of administration with customs; company personal application
	Weakness: promotion; distribution; cost limitation
External Factor Evaluation (EFE) Matrix	Opportunity: increase in cigarette excise rates; high purchasing power; the population of Indonesia is high; Indonesian government policy support; consumers choose e-cigarettes because they have a wide choice of flavors
	Threat: similarity in naming or taste; competitors in similar industries with mature distribution channels; government regulation
Competitive Profile Matrix (CPM)	AR Brew excels with its competitors by achieving a score of 3.41
SWOT Matrix	The essence of some of the descriptions is a market penetration strategy and a product development strategy that can be carried out by the AR Brew company
SPACE Matrix	The company is in the aggressive quadrant. The right strategies that AR Brew can do include market development and product development.
Internal-External (IE) Matrix	AR Brew is in the number V quadrant, which is in a hold and maintain condition. Market penetration and product development strategies are the right strategies for this quadrant.
Grand Strategy Matrix	The company is in the quadrant I position. A suitable strategy to be applied in this condition is to use an aggressive growth strategy. Forms of strategy that can be used include market development, market penetration, product development, and others
QSPM Matrix	The product development strategy is greater than the market penetration strategy

CONCLUSION

AR Brew's innovation strategy focuses more on incremental innovation in products and processes. Results supported from CPM matrix that AR Brew is superior in several factors over its competitors, especially significant in its product innovation. Results proven Tohidi & Jabbari (2012) that product innovation help organization to achieve competitive advantages in market. Reguia (2014) also

mentions product innovation as to art to present an added value to the product for realizing customers' needs.

Development in process innovation also need to address in terms of R&D and infrastructure investment, since process innovation is supporting activity to bring product innovation. Process innovation could done by conducting co-operation with external parties, the use of external information, and the acquisition of external R&D will support the introduction of new processes (Tsinopoulos, Sousa, & Yan, 2017).

Our suggestion is doing product innovation in terms of taste, such as Indonesian traditional flavour. Besides that, company also can cooperate with other investors to strengthen the company's costs and expansion. Improvement of human resources capabilities, especially for the production division also important to maintain consistency of product quality. Company also need to prevent leakage of secret product formulas with different code for the composition of chemical compounds to prevent imitation of products by workers and competitors. These strategic actions will improve product and process innovation simultaneously.

In the future, AR Brew could conduct positional innovation to expand targetmarket, such as liquid vape for elderly. Paradigm innovation also can be developed to give a training school for making liquid vape, also creating other products/services that related with e-cigarette and liquid vape.

LIMITATION & FURTHER RESEARCH

There are limitations in this research, with a business scope that has only been operating for 2 years since December 2018. So, it cannot be generalized to other e-cigarette business that have operated for more than 2 years. Besides that, the limitations also lie in time, location, and so on, since research conducted during COVID-19 pandemic. Research only focused on innovation strategy, so others variables, such as networking and customer perspective can be developed in future research to enrich perspective of e-cigarette industry.

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