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Consumer Preferences of Ijen Raung's Coffee Bag

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Abstract

Coffee bag is pure coffee packaged in a dip bag. The first advantage of this product is that consumers can enjoy black coffee with the right taste because it already has a one-time dose. Some drinkers who do not pay attention to the rest of the coffee, by consuming coffee bag they will not get the remaining coffee grounds in their drinks. This study have purpose to see the attributes that become preferences and indicators that measure the taste of the best variation of coffee bag that consumers want. The result of this research is that the coffee is dyed based on consumer preference which is coffee that has a bitter taste, an aroma that represents the taste of coffee, a strong mouth weight, and a long-lasting taste. The taste of the coffee bag with the best variation that consumer input is the natural sample, namely 4169 100% natural coffee bag with an average of 3.79. Respondents argued that the natural sample has a strong mouth weight, bitter taste, and the aroma of the sample represents coffee (has a characteristic). Coffee produced from the dry process is usually superior in the body, fruity taste (fruity), more bitter, low acidity.

Introduction

Coffee is one of the leading exported agricultural commodities because the quality and taste of coffee in Indonesia has been recognized by the world. Java ijen-raung coffee is a superior product commodity of Bondowoso Regency which is a regional intellectual property. Compared to other types of arabica coffee, java ijen-raung coffee has a blend of spicy (spicy) sensations with slight ginger and a slightly sour aroma. When compared to other arabica coffees, this typical Bondowoso coffee is considered to be arabica coffee which has a low acidity level with a very exotic sour taste.

Coffee consumption in Indonesia is supported by the pattern of people who like to consume coffee at an affordable price, practicality in serving (instant), and a variety of flavors according to consumer tastes. Coffee bag is pure coffee packaged in a dip bag. The first advantage of this product is that consumers can enjoy black coffee with the right taste because it already has a one-time dose. For some coffee drinkers who do not like the remaining coffee grounds, by consuming coffee bag they will not get the remaining coffee grounds in their drinks. Because there are several types of coffee bag innovations, it is possible to know the position of each product with its attributes. The results of this research can be effective in creating, developing, and launching new products that can accommodate all the needs and desires of consumers.

Methodology

The tools used to make coffee bag are spatula, spoon, sieve, filter paper, analytical balance, beaker glass, scoli glass, label paper, plastic clips, analytical scales, filter paper. The materials used to make coffee bag are arabica coffee (full wash, semi wash, and natural) and water.

The dyeing of coffee uses ingredients from Bondowoso coffee, the type of arabica java Ijen-raung. Arabica ijen-raung java coffee uses 6 different samples in the manufacturing process. This coffee bag uses coffee with a *full wash*, *semi wash*, *natural process* with a *roasting* temperature of around 240 ° C with a *dark roast* level. Dip coffee treatment with comparison can be seen in Table 1.

Table 1. Treatment of Coffee Bag Content

Sample	Explanation		
	<i>Full Wash</i>	<i>Semi Wash</i>	Natural
P ₁	100%	-	-
P ₂	-	100%	-
P ₃	-	-	100%
P ₄	50%	25%	25%
P ₅	25%	50%	25%
P ₆	25%	25%	50%

The stage in making coffee bag is the weighing of each sample of 12 grams of coffee powder for 210 ml of water (Specialty Coffee Association, 2018). The process of making coffee bag drinks uses materials in the form of coffee bag and hot water, and the tools used are stoves, pans, cups, label paper, and spoons. Brewing for 5 minutes which have purpose to extract the total coffee powder in the coffee bag, so that all the flavors in the coffee powder come out. After that, each sample glass is labeled to make it easier to find out the coffee sample being tested, then testing is done using the questionnaire provided. The research method uses a descriptive method that analyzes all product parameters, or it can be limited to certain aspects, such as aroma, taste, texture, and *aftertaste*. The descriptive test consists of a scoring or scaling test, which is carried out using a scale approach or linked scores to assess the intensity of the product in an increasing or decreasing arrangement. The data obtained were then processed using the chi-square method using the SPSS program to make hypothesis decisions.

Results and Discussion

Respondents

Respondents in this study were respondents who had ever consumed black coffee. The results of testing the questionnaire to 100 respondents showed that the reason respondents bought coffee was that they liked the coffee product. The frequency of coffee purchases by respondents can be seen in Figure 1.

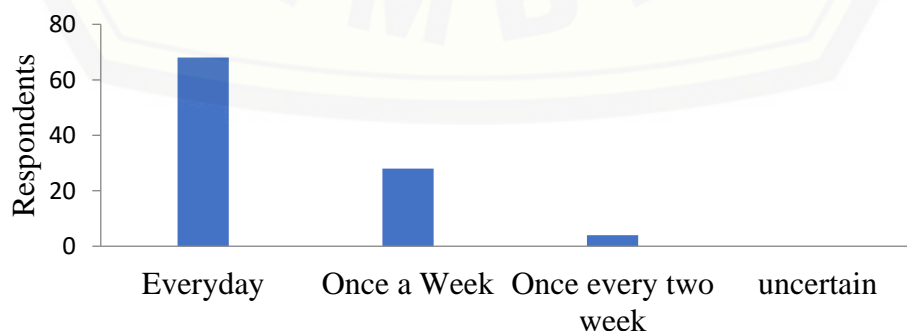


Figure 1. Consumer Purchase Preference Graph

Based on Figure 1, it can be seen that most of the respondents purchased coffee daily, namely as many as 68 respondents. The frequency of once a week is 28 respondents and every two weeks is 4 people. Respondents who purchase coffee every day reasoned that their families like coffee. The habit of drinking coffee is not new in Indonesia. According to Nurikhsan, et al (2019), making drinking coffee is a routine every day. The reason respondents buy coffee once a week or every two weeks is because their family does not really like coffee, so they only consume coffee on certain days (not every day). The number of coffee purchases by respondents can be seen in Figure 2.

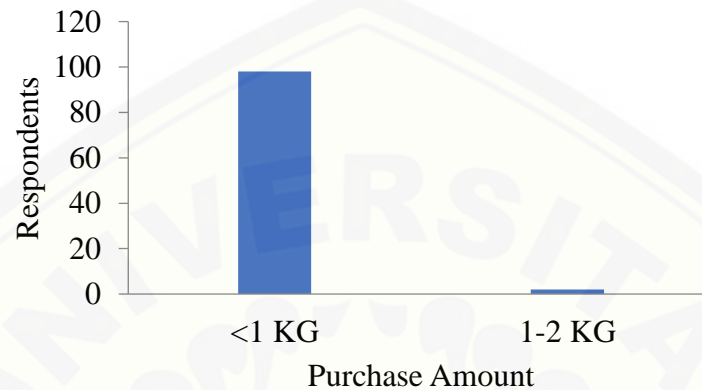


Figure 2. Number of Coffee Purchases by Respondents

Based on Figure 2 shows that most of the respondents bought coffee for less than 1 kg, namely as many as 98 respondents. Consumers consider this amount to be sufficient for coffee consumption needs per day. The total consumption of coffee powder per day is around 10.9 grams per day (Dewi et al., 2009). The coffee buying behavior according to the purchase purpose can be seen in Figure 3.



Figure 3. Purpose of Purchasing Coffee

The results of the research in Figure 3 can be seen that most of the respondents, namely as many as 99 respondents bought coffee with the aim of self-consumption in the form of coffee drinks. There is only 1 respondent who purchases coffee to be a souvenir.

Consumer Preference for Coffee Bag Attributes

Consumer preference for coffee is a choice of whether someone likes or dislikes the drenched coffee product that is consumed. This choice varies from one respondent to another. The

attributes of the coffee bag studied were taste, aroma, *body*, and *aftertaste* (final taste). The analysis results for the taste attribute can be seen in Figure 4.

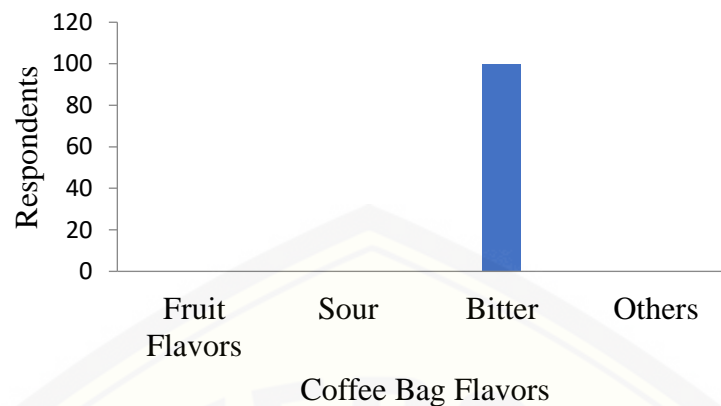


Figure 4. Analysis of Taste of Coffee Bag

The results of the study in Figure 4 show that all respondents wanted the coffee bag to have a bitter taste, as many as 100 respondents. The reason why the respondents chose the character of bitter taste was that according to the respondents, bitter coffee was the best coffee taste. The bitter taste character of coffee brewing is due to the contribution of caffeine in the coffee brewing. Caffeine is an alkaloid compound type *methylxanthine (1,3,7-trimethylxanthine)* which has a very bitter taste (Flament, 2001). The analysis results for aroma can be seen in Figure 5.

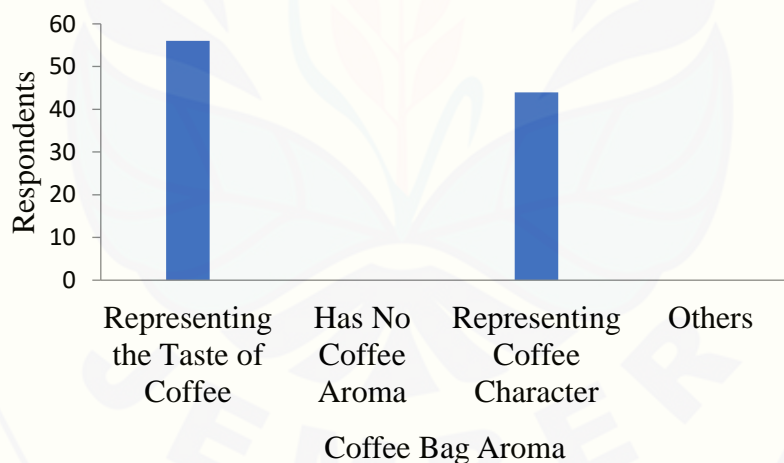


Figure 5. Results of Coffee Bag Aroma Analysis

Figure 5 shows that most of the respondents wanted coffee bag with an aroma representing the taste of coffee, as many as 56 respondents. They reasoned that by knowing the aroma of the coffee, they could tell the taste of the coffee bag. The number of respondents who chose aroma to represent the character of coffee was 44 respondents, the reason was to know that coffee was heavy or light when it was drunk later. Another attribute tested is the *body* (character) of the coffee bag. The analysis results for the *body* (character) can be seen in Figure 6.

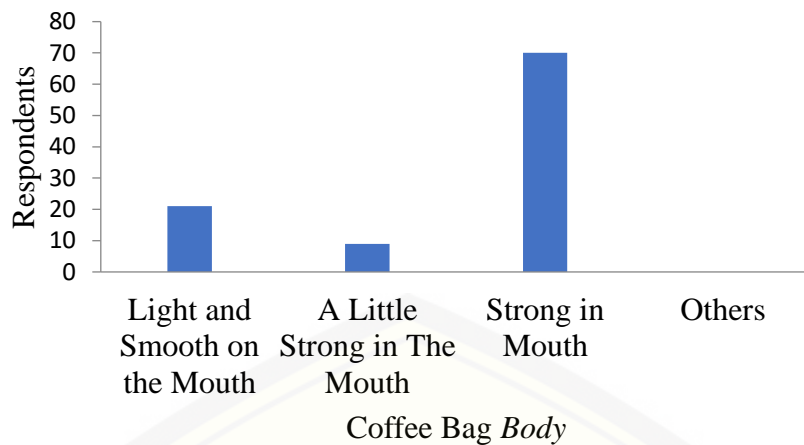


Figure 6. Results of Coffee Bag Body Analysis

Figure 6 shows that most of the respondents wanted to coffee bag with strong mouth (character) *body*, as many as 70 respondents. The reason the respondent chose a strong character was that the respondent thought that if the *body* (character) of the coffee bag strong in the mouth, the more delicious the coffee would be. As many as 21 respondents wanted coffee bag with a lightweight (character) and smooth in the mouth, arguing that they did not taste the bitterness of the coffee. Also, as many as 9 respondents wanted coffee bag with a slightly strong *body* (character). Respondents' reasons, so as not to be too bored when drinking the coffee bag. The analysis results for the *aftertaste* (final taste) can be seen in Figure 7.

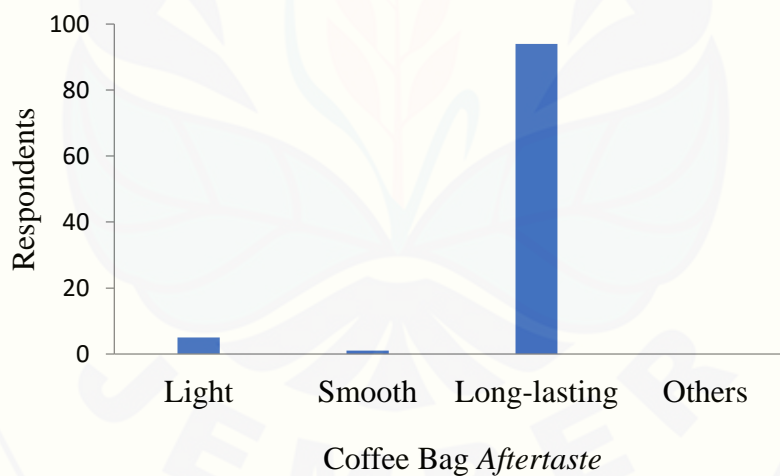


Figure 7. Final Taste Analysis Results of Coffee Bag

Figure 7 shows that most of the respondents chose the final taste of money to last a long time, as many as 94 respondents wanted a long-lasting *aftertaste*, the objective of the respondent was to choose the character of the final taste to last a long time because the respondent wanted a strong taste from the coffee bag itself. 5 respondents chose a mild final taste because they did not want the final taste to be too thick and stay on the tongue for a long time. There is only 1 respondent who chooses the final taste of the finely coffee bag. The consumer preference for coffee bag can be seen by looking at the category or attribute criteria that the consumer chooses the most. The consumer preferences can be seen in Table 2.

Table 2. Respondents' Preference for Steep Coffee

Coffee Bag Attribute	Consumer Preferences
Taste	Bitter
Aroma	Represents the taste of coffee
Body	Strong in the mouth
Aftertaste	Long-lasting

Based on Table 2, it can be seen that the respondent's preference or preference for coffee bag is that which has a bitter taste, an aroma that represents the taste of coffee has a strong coffee character in the mouth, and has a long-lasting aftertaste.

Assessment of the Taste of Coffee Bag

The main factor that affects the acceptability of the product is the taste stimulation caused by the product. Therefore, it is very important to do a taste assessment to explore consumer acceptance. The following is a table of respondents' assessment of the taste of coffee bag.

Table 3. Assessment of Taste of Coffee Bag

No	Sample	Score	Mean
1	P1	3719	3.380909
2	P2	3714	3.376364
3	P3	4169	3.79
4	P4	3288	2.989091
5	P5	3135	2.85
6	P6	2948	2.68

The results of the collection of assessments about the taste of coffee bag, the highest score was obtained by the P3 sample, namely 4169 100% natural coffee bag. Respondents argued that the P3 sample had a strong mouth weight, bitter taste, and the aroma of the sample represented coffee (having distinctive characteristics). The lowest score in sample P6 is coffee bag 25% *full wash*, 25% *semi wash*, 50% natural as many as 2948. The reasons for sample P6 respondents do not have a strong coffee taste, no special taste, and only representative aroma. The taste profile of this natural process is thought to give the coffee a fruity note, with common hints such as blueberries, strawberries, or tropical fruits. Coffee also tends to have low acidity and exotic flavors (Jonathan et al, 2020). In this case, the test is carried out using the SPSS calculation. The results of the *chi-square* analysis can be seen in Table 4.

Table 4. *Chi-Square* Analysis Results of Coffee Bag Taste

Sample	X ² _{count}	df	X ² _{table}	Explanation
P1	437.600	19	30.14	Real Different
P2	408.000	24	36.42	Real Different
P3	76.640	23	35.17	Real Different
P4	622.520	17	27.59	Real Different
P5	379.740	16	26.30	Real Different
P6	147.860	16	26.30	Real Different

The results of the calculated *chi-square* output, when compared with the calculated *chi-square*, are greater than the *chi-square* table. If the calculated *chi-square* > *chi-square* table then Ho is

rejected. It can be seen that the Sig is 0.00 or the probability is below 0.05, so Ho is rejected, or it can be said that the population distribution is not uniform in other words that the respondent is quite satisfied with the taste of coffee bag.

Consumer Preferred Assessment of the Organoleptic Properties of Coffee Bag

Respondents' assessment of their preferred coffee can be seen in Table 4.

Table 4. Respondents' Preference Assessment of Organoleptic Properties of Coffee Bag

No	Sample	Score	Mean
1	P1	1223	2.446
2	P2	1183	2.366
3	P3	1010	2.02
4	P4	1448	2.896
5	P5	1476	2.952
6	P6	1536	3.072

Table 4 shows that the preferred sample of respondents is P3, namely 100% natural coffee bag with 1010 scores. While the sample that the respondents did not like was P6, namely coffee bag 25% full wash, 25% semi wash, 50% natural as many as 1536. Because in the negative form statement, it strongly agreed to get a low score and strongly disagreed with getting a high score. The results of the *chi-square* analysis can be seen in Table 5.

Table 5. Results of *Chi-Square* Analysis of Organoleptic Properties of Coffee Bag

Sample	X ² _{count}	df	X ² _{table}	Explanation
P1	98.480	11	19.68	Real Different
P2	87.000	10	18.31	Real Different
P3	106.180	12	21.03	Real Different
P4	39.360	7	14.07	Real Different
P5	31.200	7	14.07	Real Different
P6	40.400	8	15.51	Real Different

The results of the calculated *chi-square* output, when compared with the calculated *chi-square*, are greater than the *chi-square* table. If the calculated *chi-square* > *chi-square* table then Ho is rejected. It can be seen that the Sig is 0.00 or the probability is below 0.05, so Ho is rejected, or it can be said that the population distribution is not uniform in other words that the respondent is quite satisfied with the taste of coffee bag.

Assessment of Respondents' Confidence and Evaluation of Respondents

The attitude of the coffee bag respondents can also illustrate the respondent's belief in the various attributes and benefits of the coffee bag. Respondents' confidence in coffee bag is the respondent's knowledge of the attributes and benefits. Consumer confidence and evaluation of coffee bag can be seen in Table 6.

Table 6. Respondents' Beliefs on the Attributes of Coffee Bag

Coffee Bag Attribute	Score				Total Value	Mean
	1	2	3	4		

Taste	1	99	0	0	100	
	1	198	0	0	199	1.99
Aroma	1	99	0	0	100	
	1	198	0	0	199	1.99
<i>Body</i>	3	95	2	0	100	
	3	190	6	0	199	1.99
<i>Aftertaste</i>	3	97	0	0	100	
	3	194	0	0	197	1.97

Table 6 shows that the best attribute by the respondent is the final taste of the coffee bag. Or it can be interpreted that the respondent has the belief that the final taste of the coffee bag tasted by the respondent is the best final taste. The attributes of coffee bag that were stated to be good by the respondents were the attributes of taste, aroma, and *body*.

Table 7. Respondents Evaluation of Coffee Attributes Bag

Coffee Bag Attribute	Score				Total Value	Mean
	1	2	3	4		
Taste	21	79	0	0	100	
	21	158	0	0	179	1.79
Aroma	18	81	1	0	100	
	18	162	3	0	183	1.83
<i>Body</i>	8	84	8	0	100	
	8	168	24	0	200	2.00
<i>Aftertaste</i>	10	85	5	0	100	
	10	170	15	0	195	1.95

Table 7 shows that taste has the highest level of importance in the decision to purchase coffee Bag. Respondents consider that the taste attribute is the most important or important attribute to consider in determining the purchase decision for coffee bag. The second attribute considered by respondents in making decisions to buy coffee bag is the aroma. Respondents choose this scent also based on the respondent's taste. Respondents will choose a aroma of coffee bag that represents the taste of the coffee.

The better the quality of coffee, the better the coffee aroma will be (de Melo Pereira et al., 2019; Aklimawati, et al, 2014; Gonzalez-Rios et al., 2007). The third attribute considered by respondents in the decision to buy coffee bag is *aftertaste* (final taste). Respondents also considered the final taste of coffee, as it relates to the sense of taste although it is less considered than the taste of coffee bag. The last attribute that the respondents consider when purchasing coffee bag is the *body* of the coffee bag. This attribute is the same only as of the final taste attribute.

Conclusion

This study concludes that the preferred coffee bag based on consumer preferences is coffee bag which has a bitter taste, an aroma that represents the taste of coffee, a strong mouth *body*, and a long-lasting *aftertaste*. The taste of coffee bag with the best variation that the consumers liked was sample P3, namely 4169 100% natural coffee bag with an average of 3.79. Respondents argued that the P3 sample has a strong mouth *body*, bitter taste, and the aroma of the sample

represents coffee (has a characteristic). Coffee produced from dry processing is usually superior in *body*, fruity taste, more bitter, low acidity. Suggestions that can be given are that further research should use several types of coffee such as arabica and robusta so that the results obtained are more varied. Another suggestion that can be given is that the use of a dip bag package should be improved by adding a rope to the package to make it easier for consumers when brewing coffee bag.

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