
ANALYTICAL HIERARCHY PROCESS APPROACH ON CONSUMER PREFERENCE IN BEER BRAND SELECTION. CASE STUDY: BIR BINTANG, ANKER, BALIHAI**ANALISA HIRARKI PROSES (AHP) PENDEKATAN PADA PREFERENSI KONSUMEN DALAM PEMILIHAN MEREK BIR**

By
Clairy Bolung¹
Ferdinand J. Tumewu²

^{1,2}Faculty of Economics and Business, International Business Administration, Management Program
Sam Ratulangi University

E-mail:

[¹Cbolung@gmail.com](mailto:Cbolung@gmail.com)

[²tumewufj@gmail.com](mailto:tumewufj@gmail.com)

Abstract: This research is will be conducted in Manado city. 2017. Population in this research is people in Manado who has drink and have experience with Bir Bintang, Bali Hai and Anker. The sample of this research is all consumer of Bir Bintang, Bali Hai, Anker for about 50 respondents that who has drink and have experience with Bir Bintang, Bali Hai and Anker. Consumer preference is measured in terms of the level of satisfaction from consuming various of beer brand. Beer brand criteria means factors of the beer brand are Price, Taste, Packaging, Advertisement, Peer Influence. Based on the result and discussion, two conclusions can be formulated, Price is the criteria that influence the most in selecting a beer brand, followed consecutively by taste, peer influence, packaging and advertisement. Bir Bintang is the most chosen beer brand in Manado, Bir Bintang became the most preferred beer brand because it excels in four criteria; taste, advertising, packaging, and peer influence, and in the second position is Anker, and Bali Hai in the last position. Bali Hai should improve the quality in terms of taste, because the cheaper price is not necessarily will be selected by consumers

Keywords: *consumer preference, brand selection, beer brand, criteria most influence.*

Abstrak: Penelitian ini dilakukan di kota Manado. Populasi dalam penelitian ini adalah orang-orang di Manado yang telah minum dan memiliki pengalaman dengan Bir Bintang, Bali Hai dan Anker. Sampel penelitian ini adalah semua konsumen Bir Bintang, Bali Hai, Anker untuk sekitar 50 responden yang telah minum dan memiliki pengalaman dengan Bir Bintang, Bali Hai dan Anker. Preferensi konsumen diukur dalam hal tingkat kepuasan dari mengkonsumsi berbagai merek bir. Kriteria merek bir berarti faktor harga merek bir, Rasa, Kemasan, Iklan, Pengaruh teman. Berdasarkan hasil dan pembahasan, dua kesimpulan dapat dirumuskan, Harga adalah kriteria yang paling mempengaruhi dalam memilih merek bir, diikuti secara berurutan oleh rasa, pengaruh teman, pengemasan dan iklan. Bir Bintang adalah merek bir yang paling disukai di Manado, Bir Bintang adalah merek bir yang paling disukai karena unggul dalam empat kriteria; rasa, iklan, pengemasan, dan pengaruh teman, dan di posisi kedua adalah Anker, dan Bali Hai di posisi terakhir. Bali Hai sebaiknya meningkatkan kualitas dari segi rasa, karena harga yang lebih murah belum tentu dipilih oleh konsumen.

Kata Kunci: *preferensi konsumen, pemilihan merek, merek bir, kriteria paling berpengaruh.*

INTRODUCTION

Research Background

Beverage is divided into two categories, namely: non-alcoholic beverage and alcoholic beverage. Non-alcoholic beverages such as coca cola, sprite F&N etc. while alcoholic beverage is a beverage that contains alcohol between 1/2% to 75% such as beer and wine (Antho, 2009). Beverages usually served in bar and restaurant. Beer is an alcoholic beverage fermented malt grains, cereal and given the aroma / flavor of hops. Some of famous beer brands are Bir Bintang, Anker, and Bali Hai. There are various kinds of beer. Ale, lager, stout, pilsner, cider, and barley.

The process of making beer is called brewing. Due to the materials used to make beer differ between one place and another, then the characteristics of beer (such as flavor and color) are also very different type and classification. Beer alcohol content usually ranges between 4 and 6% abv (alcohol by volume; alcohol by volume), although some are as low as less than 1% abv and which reached 20% abv

The character of the beer has changed drastically throughout thousands of years. The brewing industry is a global industry that is very large in general Although beer is an alcoholic beverage, there are several variations of the Western world in the processing dispose of almost all alcohol content, making what is called a non-alcoholic beer. As time went, drinking beer become part of culture and lifestyle in some countries. Beer became a necessity in an event or party. Where beer becomes a complementary dish that is sorely lacking when it is not in the present. On some countries, beer menus are very important in a bar or restaurant. In Indonesia itself precisely in the island of Bali. Many restaurants, bars, pubs, etc. serving beer. It shows that beer became part of the human lifestyle. Even in antiquity BC, beer became a means of payment for construction workers. It shows that beer has an existence in human life

In Manado beer become one type of grain must be supplied if there are events or anniversaries, such as weddings, birthdays and anniversaries such as Christmas, New Year and Eid. The beer should be provided to give to guests who will come, especially for men. Beer is also a menu when chatting with friends or colleagues, even beer became a drink while relaxing at home or in the other vacations. In addition, lots of restaurants also serve beer, even the traditional restaurants such as Minahasan restaurant also provide beer on their menu list. The variety of beer brand that can be found in Manado market are various such as Bir Bintang, Bali Hai, Anker, etc. In a variety of restaurants many of which provide Bir Bintang and Bali Hai, while in pubs / discos many of which provide an Anker.

Therefore, based on the background above, it is really interesting to conduct a research about beer industry in Manado and their customer with title "Analytical Hierarchy Process (AHP) approach on Consumer Preference in Beer Brand Selection (Case Study: Bir Bintang, Anker, Bali Hai)".

Research Objectives

Based on the research problem, the research objectives to be achieved is to identify analytical hierarchy process of this research to know which beer brand people choose the most and to know which criteria has influence the most in selecting a beer brand.

THEORETICAL REVIEW

Marketing

Marketing is the activity, set of institutions, and processes for creating, communicating, delivering, and exchanging offerings that have value for customers, clients, partners, and society at large. Marketing research is the function that links the consumer, customer, and public to the marketer through information used to identify and define marketing opportunities and problems; generate, refine, and evaluate marketing actions; monitor marketing performance; and improve understanding of marketing as a process. Marketing research specifies the information required to address these issues, designs the method for collecting information, manages and implements the data collection process, analyzes the results, and communicates the findings and their implications.

Consumer behavior

Consumer behaviour is the study of how individual customers, groups or organizations select, buy, use, and dispose ideas, goods, and services to satisfy their needs and wants. It refers to the actions of the consumers in the marketplace and the underlying motives for those actions.

The study of consumer behaviour assumes that the consumers are actors in the marketplace. The perspective of role theory assumes that consumers play various roles in the marketplace. Starting from the information provider, from the user to the payer and to the disposer, consumers play these roles in the decision process, (Chand,2004).

Consumer Preferences

Consumer preference is a marketing term meaning a consumer likes one thing over another. For instance, a trend may indicate consumers prefer using debit cards over credit cards to pay for goods. Companies rely on surveys, information and data in order to customize products and services based upon consumer preferences, according to Cambridge Online Dictionaries. Consumer preference is a general term applied to all facets of marketing products and services. This is not to be confused with the more-specific term brand preference, which relates to consumers preferring one brand over competing brands. If one brand is unavailable, consumers will likely choose another brand to fill the gap.

Consumer preference is measured in terms of the level of satisfaction the consumer obtains from consuming various combinations of bundles of goods. In order to become a successful marketer, he must know the liking or disliking of the customers. He must also know the time and quantity of goods and services, a consumer may purchase, so that he may store the goods or provide the services according to the likings of the consumers. Gone are the days when the concepts of market was let the buyer's beware or when the market was mainly the seller's market. In this sense, "consumer is the supreme in the market". A consumer plays a very vital role in the health of the economy local, national or international (Ubeja and Jain, 2013).

Price

Price is a value that will purchase a finite quantity, weight, or other measure of a good or service. As the consideration given in exchange for transfer of ownership, price forms the essential basis of commercial transaction. It may be fixed by a contract, left to be determined by an agreed upon formula at a future date, or discovered or negotiated during the course of dealings between the parties involved. In commerce, price is determined by what (1) a buyer is willing to pay, (2) a seller is willing to accept, and (3) the competition is allowing to be charged. With product, promotion and place of marketing mix, it is one of the business variable over which organizations can exercise some degree of control (Business Dictionary, 2014).

Taste

Taste is a way of selecting food that must be distinguished from the taste of the food. Taste is a food attribute that includes appearance, smell, taste, texture, and temperature. Flavor is a form of cooperation of the five kinds of human senses, namely taste, smell, touch, perception, and hearing. Taste itself is the result of taste work (taste buds) located on the tongue, cheeks, esophagus, roof of the mouth, which is part of the taste.

Packaging

Packaging is the enclosing of a physical object, typically a product that will be offered for sale. (Kumar, 2014). Packaging is a coordinated system for preparing goods ready to be transported, distributed, stored, sold, and used. The presence of a container or wrapper can help prevent or reduce damage, protect the products contained therein, protect against the dangers of pollution and physical disturbance (friction, impact, vibration). In addition, packaging serves to place a processing or industrial products in order to have forms that facilitate the storage, transport and distribution. In terms of promotion of container or wrapping serves as a stimulator or attraction buyers. Therefore, the shape, color and decoration of the packaging need to be considered in the planning

Advertisement

Advertising is a non personal paid form where ideas, concept, products or services and information are promoted through media (visual, verbal and text) by an identified sponsor. Of all marketing weapons, advertising is renowned for its lasting impact on viewers mind and its exposure is much broader stated that advertisements inform consumers about the existence and benefits of products and services, and to persuade consumers to buy them. Moreover, advertising aim at attaining target consumers to either think or react to the product or brand. As a method of achieving advertisement goals, advertisements as well as their content play a vital role in the process of commercial communication.

Peer Influence

The act of being affected by someone (Rimm, 2010). Peer influence is when you choose to do something you wouldn't otherwise do, because you want to feel accepted and valued by your friends. It isn't just or always about doing something against your will, but also against your belief, against your standard, against your values just because you want to belong (Risingchildren.net.au, 2017).

Previous Research

Okwandu (2001). This study investigated factors which influence brand preference behaviour of beer consumers in Nigeria, with particular reference to Port Harcourt metropolis. It was considered that 240 beer consumers drawn from among all the beer consumers in Port Harcourt would be adequate for this study.

Christian and Sunday (2013). This study was to identify the factors influencing preference for a brand of beer in Port-Harcourt metropolis and determine their relationship with brand preference of beer consumption.

Gjonbalaj et al (2009). This study analyzes and presents important findings on the consumers buying behavior and their preferences for beer. The paper also tests whether there is dependency of frequencies buying beer with demographic and economic factors..

Galizzi (2012). This study investigate the role and impact of exposure to brands in consumers' evaluations of lager beers, and explore its relation with exposure to intrinsic information. The first objective is to study the ability of young consumers to identify their preferred beer.

Conceptual Framework

This is the research framework, illustrates about the five criteria (price, taste, packaging, advertisement, and peer influence) that become influence in selecting the beer brand by consumer to buy Bir Bintang, Bali Hai or Anker.

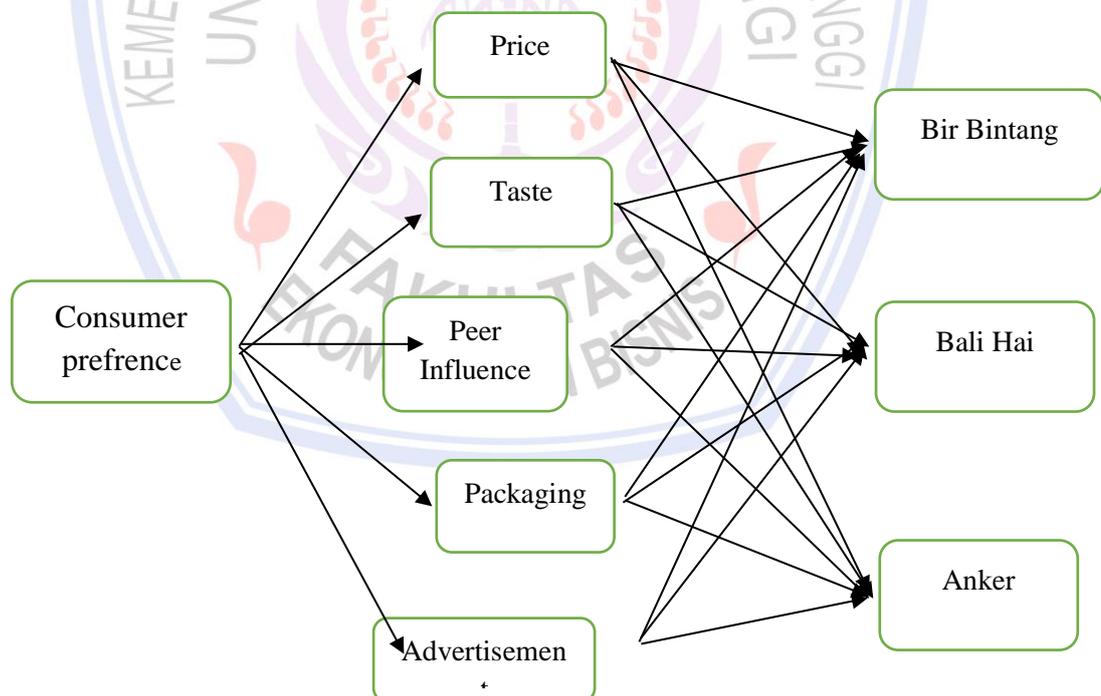


Figure 1. Coceptual Framework

Source: Journal Review, (2017)

Figure 1 of the research framework explains the consumer prefers which criteria are among the 5 criteria. Then from the above 3 brands of beer, what beer brands are superior among the 5 criteria.

RESEARCH METHOD**Type of Research**

This research will use quantitative method. Quantitative research seeks to quantify the data. It seeks conclusive evidence based on large, representative samples and typically involving some form of statistical analysis (Malhotra, 2009).

Place and Time of Research

This research is will be conducted in Manado city. This research will be held from March to April 2017.

Research procedure

This is contained the step of the researcher done this research.

1. Determine factors
2. List indicators in questionnaire
3. Survey by questionnaire
4. Collecting questionnaire
5. Tabulation and data processing
6. Analyze level of consumer prefer and priority handling

Population

Population refers to the entire group of people, events, or things of interest that the researcher wishes to investigate. It is the group of people, events, or things of interest for which the researcher wants to make inferences based on sample statistics (Sekaran and Bougie, 2009). Population in this research is people in Manado who has drink and have experience with Bir Bintang, Bali Hai and Anker.

Sample

The sample of this research is all consumer of Bir Bintang, Bali Hai, Anker for about 50 respondents that who has drink and have experience with Bir Bintang, Bali Hai and Anker. The sampling design is purposive sampling. Purposive sampling techniques have also been referred to as nonprobability sampling or purposeful sampling or “quantitative sampling.” As noted above, purposive sampling techniques involve selecting certain units or cases “based on a specific purpose rather than randomly” (Tashakkori and Teddlie, 2003)

Primary Data

Primary data refer to information obtained first-hand by the researcher on the variables of interest for the specific purpose of the study (Sekaran and Bougie, 2009). Individuals provide information when interviewed, administered questionnaires, or observed. Group depth interviews, or focus groups, are another rich source of primary data. The primary data used in this research is questionnaire that will be distributed to respondents.

Measurement of Research Variable

A scale is a tool or mechanism by which individuals are distinguished as to how they differ from one to another on the variables of interest to our study (Sekaran and Bougie, 2009). A ratio scale is a measurement scale in which a certain distance along the scale means the same thing no matter where on the scale you are, , and where “0” on the scale represents the absence of the thing being measured. Thus a “4” on such a scale implies twice as much of the thing being measured as a “2”. The ratio scale overcomes the disadvantage or the arbitrary origin point of the interval scale, in that it has an absolute zero point, which is a meaningful measurement point. The ratio scale not only measures the magnitude of the differences between points on the scales but also taps the proportions in the differences (Sekaran and Bougie, 2009).

Pair wise comparison is carried out aiming at the elements in a certain hierarchy, so as to get the importance. The assessment scale of AHP has five items, that is, Equally Important, Slightly important, Important, Very Important, Absolutely Important, with 1, 3, 5, 7, 9 measurement values. There are another four items with 2, 4, 6, 8 measurement values. The paired comparison scale is used when, among a small number of objects, respondents are asked to choose between two objects at a time. This helps to assess preferences. If, for instance, during the paired comparison, respondents consistently show a preference for product one over product two, three, and four, the manager can understand which product line demands his utmost attention. The number of paired choices for n objects will be $[(n) (n-1)/2]$. The greater the number of objects or stimuli, the

greater the number of paired comparison presented to the respondent, and the greater the respondent fatigue (Sekaran and Bougie, 2009).

Data Analysis Method

The Analytic Hierarchy Process (AHP) is due to Saaty (1980) and is often referred to, eponymously, as the Saaty method. It allows users to assess the relative weight of multiple criteria or multiple options against given criteria in an intuitive manner. In case quantitative ratings are not available, policy makers or assessors can still recognize whether one criterion is more important than another. Therefore, pairwise comparisons are appealing to users. Saaty established a consistent way of converting such pairwise comparisons (X is more important than Y) into a set of numbers representing the relative priority of each of the criteria.

RESULT AND DISCUSSION

Result

Beer brand criteria are the factors that influence people in selecting Beer Brand, particularly in Manado. Beer brand criteria consist of price, taste, packaging, advertisement and peer influence.



Figure 2. Results of Overall Criteria
 Source: Data Processed, 2017

Figure 2 shows that the highest score is price (0.3142). It means that price is the factor that influencing the most people to buy a beer brand. In other words, beer with lower price was be chosen most of the respondents. The second highest influence was shown by taste (0.3052), followed by peer influence (0.1607), packaging (0.1243), and advertisement (0.0956). The overall consistency ratio is 0.07 (as shown in table). In general, the degree of consistency is satisfactory (acceptable) if consistency ratio ≤ 0.10 . It means the data comparison in this result is consistent.

Result of Pairwise Comparison of Price

This is the result of pairwise comparison of price in determining consumer preference in beer brand selection after research.



Figure 3. Price
 Source: Data Processed, 2017

Figure 3 shows that in terms of price, Bali Hai is the most preferred beer brand as indicated by its score of 0.59, followed by Anker (0.25), Bir Bintang (0.16). Bali Hai is the beer with the lower price. In general, the degree of consistency is satisfactory (acceptable) if consistency ratio ≤ 0.10 . The consistency ratio of price is 0.04. It means the data comparison in this result is consistent.

Result of Pairwise Comparison of Taste

This is the result of pairwise comparison of taste in determining consumer preference in beer brand selection after research.

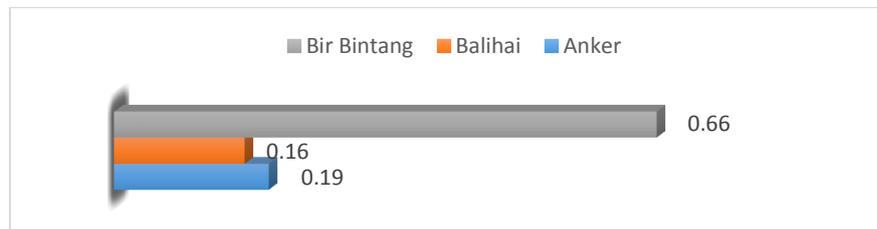


Figure 4. Taste

Source: Data Processed, 2017

Figure 4 shows that in terms of taste Beer Bintang is the most preferred beer brand selection as indicated by its score of (0.66), followed by Anker (0.19) and Bali Hai (0.16) with the lowest score by the respondent. In general, the degree of consistency is satisfactory (acceptable) if consistency ratio ≤ 0.10 . The consistency ratio of taste is 0.02. It means the data comparison in this result is consistent.

4.2.2.3 Result of Pairwise Comparison of Packaging

This is the result of pairwise comparison of packaging in determining consumer preference in beer brand selection after research.

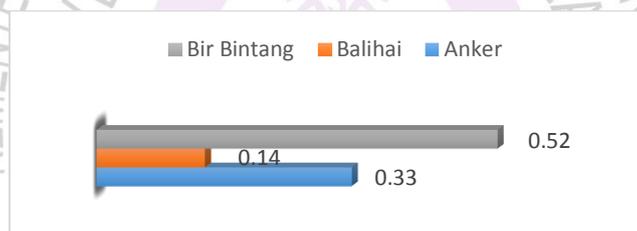


Figure 5. Packaging

Source: Data Processed, 2017

Figure 5 shows that in term of packaging Bir Bintang is the most preferred beer brand as indicated by its score of (0.52), followed by Anker (0.33), and Bali Hai (0.14) with the lowest score by the respondent. In general, the degree of consistency is satisfactory (acceptable) if consistency ratio ≤ 0.10 . The consistency ratio of packaging is 0.04. It means the data comparison in this result is consistent.

4.2.2.4 Result of Pairwise Comparison of Advertisement

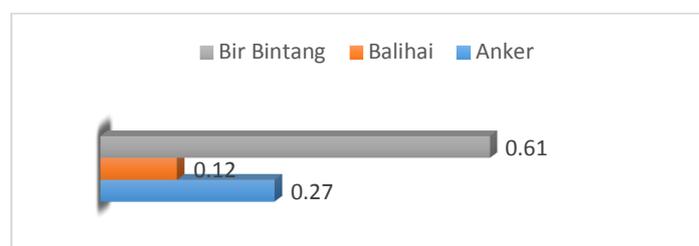


Figure 6. Advertisement

Source: Data Processing, 2017

Figure 6 shows that in terms of advertisement Beer Bintang is the most preferred beer brand selection as indicated by its score of (0.61), followed by Anker (0.27) and Bali Hai (0.12) with the lowest score by the

respondent. In general, the degree of consistency is satisfactory (acceptable) if consistency ratio ≤ 0.10 . The consistency ratio of advertisement is 0.06. It means the data comparison in this result is consistent.

4.2.2.5 Result of Pairwise Comparison of Peer Influence

This is the result of pairwise comparison of peer influence in determining consumer preference in beer brand selection after research.

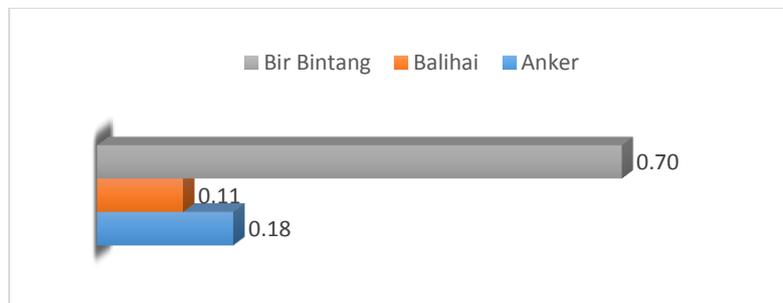


Figure 7. Peer Influence

Source: Data Processed, 2017

Figure 7 shows that in terms of peer influence Beer Bintang is the most preferred beer brand selection as indicated by its score of (0.70), followed by Anker is left far behind (0.18) and Bali Hai (0.11) with the lowest score by the respondent. In general, the degree of consistency is satisfactory (acceptable) if consistency ratio ≤ 0.10 . The consistency ratio of peer influence is 0.04. It means the data comparison in this result is consistent.

Result of Analytical Hierarchy Process Approach on Consumer Preference in Beer Brand Selection

This is the result of analytical hierarchy process on consumer preference in beer brand selection after observation.



Figure 8. Result of AHP (Best Beer Brand)

Source: Data Processed, 2017

Based on the observation, this research (figure 8) show that respondents choose Bir Bintang as the most preferred Beer Brand for them among the other alternatives. Bir Bintang have the highest score with 0.62, followed by Anker with score 0.23, and Bali Hai in the last position with score 0.15. The overall consistency ratio is 0.07. In general, the degree of consistency is satisfactory (acceptable) if consistency ratio ≤ 0.10 . It means this result is consistent.

Pairwise Comparison for the Main Criteria analysis

Price become the highest influence criteria when the customer wants to determine the choice of buying a beer brand. Price becomes very important in considering which beer will be in select customers. The price of one bottle of beer is in the range of Rp.30.000 because the price of beer triples more expensive than usual drinks (tea, coffee and juice) which is in the range of Rp.10.000 so people prefer beer at an affordable price. Respondents from the questionnaire were dominated among the students and did not yet have a job. The usual price of food purchased by respondents dominated by students ranges from Rp 30.000 which costs the same as the price of one bottle of beer, so they prioritize prices in determining the choice to buy a beer brand.

The second position of the criteria influenced by the respondent is the taste. Taste becomes the thing that has a strong influence in determining the choice to buy a beer brand. based on research taste is ranked second after price, but the distance between them is little, it shows that taste is not less important with the price in determining the choice to buy a beer brand. People will buy a brand of beer that has a delicious taste and suits their taste, there is also a taste variant of beer that invites the intention of the customers to buy.

Third highest position that influence criteria according to the respondent is peer influence. When customers who want to buy a brand often ask their friend what brand of beer to buy, or when we are deciding what brand of beer we buy often our friend will recommend buying beer in accordance with his recommendations because of the variety reason and do not buy beer that we like. This shows that peer influence has an influence in determining the choice to choose or buy a beer brand.

Next, the fourth position is followed is packaging. Packaging is also one of the important criteria when people want to buy a brand of beer. Customers will buy beer brands that have attractive or easy to carry or easy to store packaging. It makes beer producers take out products they sell with various packaging, some are in glass bottles so it is easy to pour into the glass and there is a can in packaging that makes it easier for people to drink it and make it easier for people who will bring the beer.

And the last place is advertisement. Even if the advertisement is in the last position does not mean the advertisement are unimportant, the ads have influence but not as important to the other four criteria (price, taste, packaging, and peer influence).

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

Based on the result and discussion, two conclusions can be formulated:

1. Price is the criteria that influence the most in selecting a beer brand, followed consecutively by taste, peer influence, packaging and advertisement.
2. Bir Bintang is the most chosen beer brand in Manado, Bir Bintang became the most preferred beer brand because it excels in four criteria; taste, advertising, packaging, and peer influence, and in the second position is Anker, and Bali Hai in the last position.

Recommendations

This is the recommendation after research, and two recommendation can be formulated:

1. Price become a criterion that influence the most in selecting a beer brand with score 0.3142, price is a value that will purchase a finite quantity, weight, or other measure of a good or service. as the consideration given in exchange for transfer of ownership, price from the essential basis of commercial transaction. Because of that price become a factor that influence people in selecting some of beer brand because of the many beer products on sale that have the same tastes so people will consider the price in buying a brand of beer. taste is in second position with score 0.3052 very small difference (0.009) with price
2. Bali Hai is a brand of beer with the cheapest price between Bir Bintang and Anker, but people choose to buy Bir Bintang with a better taste according to the respondents. Therefore, Bali Hai must improve the quality in terms of taste, because the cheaper price is not necessarily will be selected by consumers. And Bintang Beer must also have a breakthrough on the price, because the expensive price affects consumer buying interest, as well as Anker who must improve the taste quality and consider the price.

REFERENCES

- Antho. 2009. Pengetahuan Tentang Beverage. *Article*. Retrieved From <http://rizkyjavanet.blogspot.co.id>. Accessed on March 27th 2017.
- Business Dictionary. 2014. *Place Branding With Native Species: Personality As A Criterion Price*. *Article*. Retrieved From www.businessdictionary.com. Accessed on July 27th 2017.
- Chand, S. 2004. Decision Making Advertisement: Decision Making in Management: Definition and Features. *Journal*. Retrieved From www.ama.org. Accessed on March 27th 2017.

- Christian, A. and Sunday, E, M. 2013. Factors Influencing Brand Preference of Beer Consumption In Port-Harcourt Metropolis, Rivers State, Nigeria. *European Journal of Business and Management*. Retrieved From www.ama.org. Accessed on March 27th 2017.
- Galizzi, M. 2012. Probably Not The Best Lager In The World: Effect Of Brands On Consumers Preferences In A Beer Tasting Experiment. *Liuc Papers n. 254, Serie Economia e Impresa 65*. Retrieved From <https://ideas.repec.org>. Accessed on July 27th 2017.
- Gjonbalaj, M. Miftari, I. Bytyqi. H. and Shkodra, J. 2009. Kosovo Beer Markets – Consumer Preferences and Buying Behaviour. *Economic, social, political and cultural problems of the future society*. Retrieved From www.Researchgate.net. Accessed On July 27th 2017.
- Malhotra. 2009. An Assesment Of Survey Research In POM: From Constructs To Theory. *Journal Of Business to-Business Marketing*. Retrieved From www.sciencedirect.com/science/article/pii/S1877042815038148. Accessed on July 27th 2017
- Market Research Nusantara. 2014. Analisis Pengaruh Persepsi Konsumen Atas Diferensiasi Bintang Zero Terhadap Niat Beli Ulang. *Article*. Retrieved From <http://moskonamear.blogspot>. Accessed On July 27th 2017.
- Okwandu, G. 2001. Factors Influencing Brand Preference of Beer Consumer in Nigeria. *Nigerian Journal of social and Development Issues*. Vol. 1. No. 1 June 2001. Retrieved on www.researchgate.net. Accessed on July 27th 2017.
- Rimm, S. 2010. *Peer Influence Research background*. 2015. *Article*. Retrieved From www.SatuHarapan.com. Accessed On on March 27th 2017
- Saaty, T. L. 1980. The Analytic Hierarchy Process. *Journal McGraw Hill International*. Retrieved From www.Inderscienceonline.com. Accessed on July 27th 2017.
- Sekaran and Bougie. 2009. *Research Methods for Business: A Skill Building Approach* John Willey & Sons, Limited Academic Internet Publishers Incorporated. Fifth Edition. Wiley Chichester. Hoboken, New Jersey
- Tashakkori And Teddlie. 2003. Handbook Of Mixed Methods In Social And Behavioral Research. *Journal Thousand Oaks*. Retrieved On <https://scholar.google.co.id>. Accessed On July 27th 2017.
- Ubeja, S. K. and Jain, D. 2013. *A Study of Consumers Preference towards Branded & Loose Tea: With Reference to Indore City*. Retrieved On. <http://pbr.co.in/november2013/4pdf>. Accessed on July 2017.