ANALYSIS OF CONSUMER PREFERENCE OF SUV CAR IN MANADO USING ANALYTICAL HIERARCHY PROCESS (AHP) METHOD
(CASE STUDY BETWEEN TOYOTA FORTUNER, MITSUBISHI PAJERO, AND HONDA CRV)

ANALISA PREFERENSI KONSUMEN TERHADAP MOBIL SUV DI MANADO MENGGUNAKAN METODE PROSES ANALISA HIRARKI
(STUDI KASUS ANTARA TOYOTA FORTUNER, MITSUBISHI PAJERO, DAN HONDA C-RV)

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Abstract: Sport Utility Vehicle (SUV) car is existed in Indonesia. A Sport Utility Vehicle (SUV) is a vehicle similar to a station wagon or estate car that is usually equipped with four-wheel drive for on-road or off-road ability. This research aims to analyze the most important criteria for customer to choose the SUV car and the most preferable SUV car for customer. This research used analytical hierarchy process with sample is 40 respondends that were obtained from citizen in Manado. The result from this research shown that safety, quality, and comfortable are the most important things that influence consumer in selecting a SUV cars particularly in Manado Ana Toyota Fortuner become the most preferred SUV cars by the consumer. Every car company in Manado have to pay attention seriously toward this factor. Consumer will seek an SUV car with a good quality and best safety for the product. Mitsubishi Pajero and Honda Cr-v as the competitors of Toyota Fortuner, have to improve their performance that can attract more customer, especially for some criteria that make customer tend to choose Toyota Fortuner.

Keywords: consumer preference, ahp, suv car

Abstrak: *Mobil Sport Utility Vehicle (SUV) ini ada di Indonesia. Sport Utility Vehicle (SUV) adalah kendaraan yang mirip dengan station wagon atau mobil estate yang biasanya dilengkapi dengan four-wheel drive untuk kemampuan on-road atau off-road. Penelitian ini bertujuan untuk menganalisis kriteria yang paling penting bagi pelanggan untuk memilih mobil SUV dan mobil SUV yang paling disukai untuk pelanggan. Penelitian ini menggunakan proses analisa hirarki dengan sampel sebanyak 40 responden yang diperoleh dari warga di Manado. Hasil dari penelitian ini menunjukkan bahwa keselamatan, kualitas, dan kenyamanan merupakan hal terpenting yang mempengaruhi konsumen dalam memilih mobil SUV khususnya di Manado Ana Toyota Fortuner menjadi mobil SUV yang paling diminati oleh konsumen. Setiap perusahaan mobil di Manado harus memperhatikan secara serius faktor ini. Konsumen akan mencari mobil SUV dengan kualitas bagus dan keamanan terbaik untuk produk. Mitsubishi Pajero dan Honda Cr-v sebagai pesaing Toyota Fortuner, harus meningkatkan kinerjanya sehingga bisa menarik lebih banyak pelanggan, terutama untuk beberapa kriteria yang membuat konsumen cenderung memilih Toyota Fortuner.*

Kata kunci: preferensi konsumen, ahp, mobil suv

INTRODUCTION

Research Background

Transportation plays a vital role in people life. Every people depend on transportation regarding their daily activities, and without transportation it is going to be unimaginable. The importance of transportation emerges even without saying in the current scenario where not just relocation of living and non- living things rely on its means but also the entire planning of an economy is done without neglecting even an element of transportation, to say the least.

With the development of science and technology, the cars have already become the important component in our daily life gradually. Since one century ago, the auto industry has been developed at full speed worldwide, and has brought the enormous progresses to our life. Cars make our life convenient and swift. Beginning from the concept of transporting people from one point to another, transporting goods from one place to another, until the car can fulfill self-esteem or prestige of the wearer.

Nowadays, a Sport Utility Vehicle (SUV) car is existed in Indonesia. A Sport Utility Vehicle (SUV) is a vehicle similar to a station wagon or estate car that is usually equipped with four-wheel drive for on-road or off-road ability. SUV is expanded as Sports Utility Vehicles and are big cars, which were designed to go over rough surfaces or off road.

Manado as a developing city that always following the current trend, has begun to use the SUV car. In other side, Manado citizen usually have intention to buy something not just based on their needs but also something that become trend and easy to being influenced by their friends, or suggestion from family. The SUV car enthusiasts in Manado also increased and can be see that there's a lot of SUV car in Manado.

Research Objective

Based on the research problem, the objectives of this research are:
1. To identify which criteria is the most important for customer in selecting a SUV cars.
2. To identify which SUV cars is the most preferable for people.

THEORETICAL FRAMEWORK

Marketing

Marketing is the process by which companies create value for customers and build strong customer relationships in order to capture value from customer in return. (Kotler and Armstrong, 2010:29). Marketing means managing markets to bring about profitable exchange relationship by creating value and satisfying needs and wants.

Consumer Behavior

Consumer behavior can be defined as "the study of individuals, groups or organizations and the processes they use to select, secure, use and dispose of products, services, experiences or ideas to satisfy needs and the impacts that these processes have on the consumer and society" (Hawkins et al, 2001).

Consumer Preference

Consumer preferences are defined as preferred or disliked by a person against a good or service consumed. Consumer preferences show consumers' preference for variety selection of existing products (Larasati, 2013). Consumer preference is a general term applied to all facets of marketing products and services.

Price

Price is that which is given up in an exchange to acquire a goods or service. Price plays two roles in the evolution of product alternatives: as a measure of sacrifice and as an information cue (McDaniel et al, 2011). Price is the amount of money charged for a product or service. Setting and managing a product's price is one of the most critical decisions a company must take, because price is the only element in a company's marketing mix that produces revenue.

Perceived Quality

Perceived quality is intangible. It is feeling or perception about the product or service what the consumer thinks the quality of the product or service is. It doesn't have to reflect the actual quality; it is simply the perception of the consumer.

Safety

Safety is relative freedom from danger, risk, or threat of harm, injury, or loss to personnel and/or property, whether caused deliberately or by accident (businessdictionary, 2015). The designer and manufacturer of a product have a moral obligation to make sure that a customer / consumer is not injured by it when used.

Interior

Interior vehicle is an important factors for costumers' satisfaction. To achieve an optimized product subjective evaluation methods as well as analysis and prediction tools have to be combined to provide reliable information relevant for the judgment of product quality and comfort situation (Krebber, 2000).

Comfortable

According to Parson (1993), comfort is influenced by a combination of physical, physiological and psychological factors. Some factors include solar radiation and glazing, inside and outside colors, the size of the vehicle, the clothing type of the passengers and passenger capacity of the vehicle cabin.

Advertisement

Advertising is a primary tool for firms to affect the performance of their products, especially in markets for consumer goods such as cars, computers, cell phones, and digital cameras. Such markets are characterized by the continuous turnover of multiple relatively close substitute products

Multi-Criteria Decision Making

Most decision making involves complicated procedures in which decision makers rank the alternatives of a choice according to multiple criteria (Saaty, 2008). There have been many studies that have provided solutions for complicated decision making including multiple criteria.

Previous Research

Apak et al (2012) entitled *"Analytic Hierarchy Process Approach with a Novel Framework for Luxury Car Selection."*. The results indicate that flexibility and brand image take an important role on auto all evaluators who assigned pairwise comparison judgments appear to be satisfied with the final selection of the luxury car.

Dae-Ho Byun (2000) entitled *"AHP Approach for Selecting an Automobile Purchase Model"*. As the car market becomes more competitive, there is a greater demand for innovation that provides better customer service and strategic competition in the business management. This paper presents a new methodological extension of the AHP by focusing on two issues. One combines pairwise comparison with a spreadsheet method using a 5-point rating scale. The other applies the group weight to a reciprocal consistency ratio.

Zhang and Ming Zhang (2015) entitled *"Determinants of Consumer's Automobile Purchase Decisions in China: Focus on Automobile Size"*. The results of this study will help carmaker better understand Chinese consumers' decision-making behavior, and formulate a new product development strategy and marketing strategy.

Anandh and Sundar (2014) entitled *"Factors Affecting Consumer's Brand Preference of Small Cars"*. The results show that value, comfortable, efficiency and need are positively influencing the consumer's overall satisfaction about small cars at one per cent level of significance, while accessibility is also positively influencing the consumer's overall satisfaction about small cars at five cent level of significance.

Conceptual Framework

Figure 1. Conceptual Framework
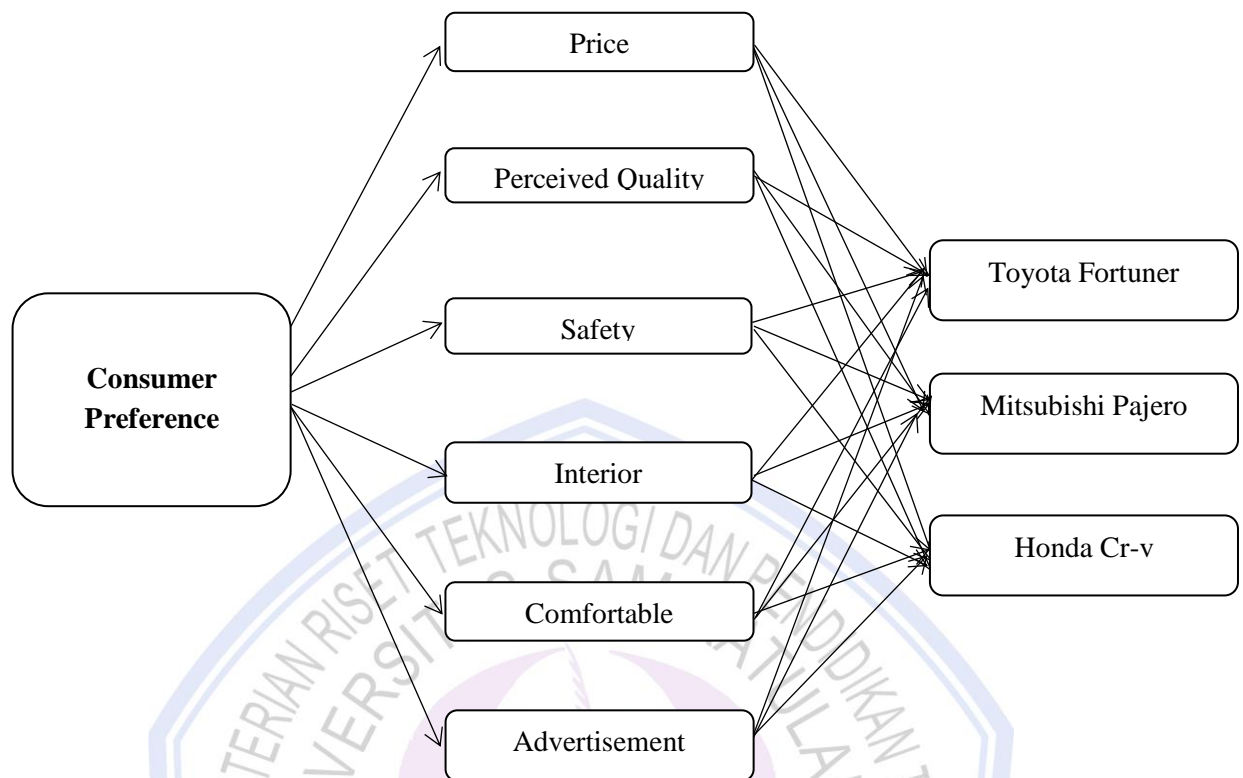
Source: Data Processed, 2016

RESEARCH METHOD

Type of Research

This research used quantitative method. The method used in this research is Analytical Hierarchy Process (AHP).

Place and Time of Research

The place of this research will be conducted in Manado, started from August to October 2016.

Population and Sample

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, 2009:262). Population in this research is people in Manado that already ride or drive the car.

The sample of this research is all people that have experience ride or drive the car (Toyota Fortuner, Mitsibishi Pajero Sport, Honda Cr-v) as many as 40 respondents. Researcher choose 40 respondents because to find the respondent that have experience in ride or drive the three of SUV car is quite difficult. The sampling design is purposive sampling.

Data Collection Method

This research used a primary data. 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.

Operational Definition of Research Variable

1. Price, in buying process, people will look on the price first. People always want a product with a cheap price.

2. Quality, before make a decision to buy something, people will make sure that it has a good quality
3. Safety, every people will choose car will good safety because it concern to a human life. People will prefer a car that already pass a safety test.
4. Interior, every type of car has a different interior, from standard to a luxurious interior. Usually it will be adapted with the price of car.
5. Comfortable, in choosing a car, beside price and quality, people will considered about the comfortable. A good quality car will has a comfortable seat inside.
6. Advertising, advertising refers to the way to attract consumer attention to recognize the product.

Data Analysis Method
Analytical Hierarchy Process

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.

RESULT AND DISCUSSION

Result

The result of this research was obtained by using Analytical Hierarchy Process (AHP) by comparing three SUV cars that are Toyota Fortuner, Mitsubishi Pajero, and Honda Cr-v based on several criteria such as price, quality, safety, interior, comfortable, advertising.

Analytical Hierarchy Process (AHP) Results
**Figure 2. Result of the Overall Criteria**
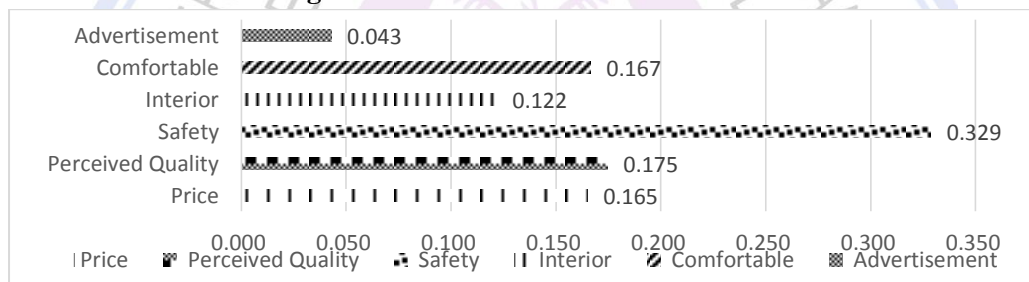
Source: Data Processed, 2016

Figure 2 shows that the highest score is safety (0.329), it means safety is the factor that have influence the most people to choose a car among the others criteria. The second is perceived quality (0.175), comfortable is in third position with score 0,167, followed by price (0.165). The rest filled by interior (0.122), and advertising as the lowest score (0,043). As the overall inconsistency = 0.061, it mean the data comparison in this result is valid and consistent.

Result of Pair Wise Comparison of Price
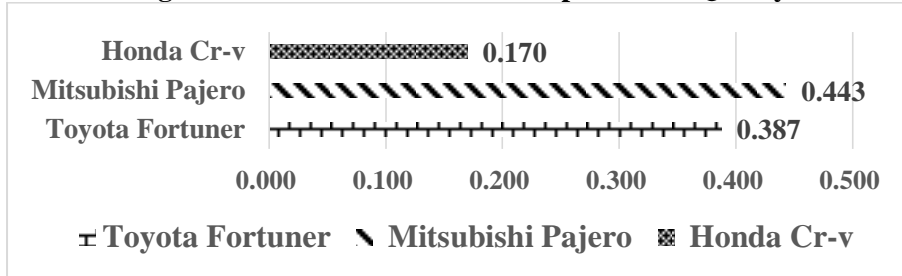**Figure 3. Result of Pair Wise Comparison of Price**
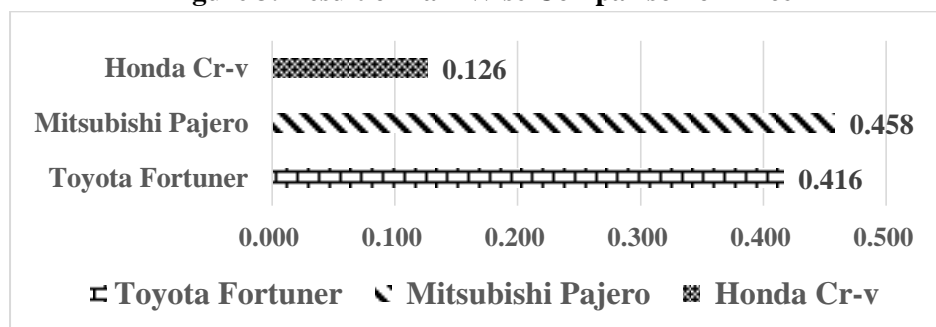
Source: Data Processed, 2016

In figure 3 about price shows that Mitsubishi Pajero is the most preferred by respondent (0.458), second is Fortuner (0.416), followed by Cr-v with the lowest score by respondents (0.126) and the overall inconsistency for result of quality is (0.007), it means the data comparison by respondents is valid and consistent.

Result of Pair Wise Comparison of Quality
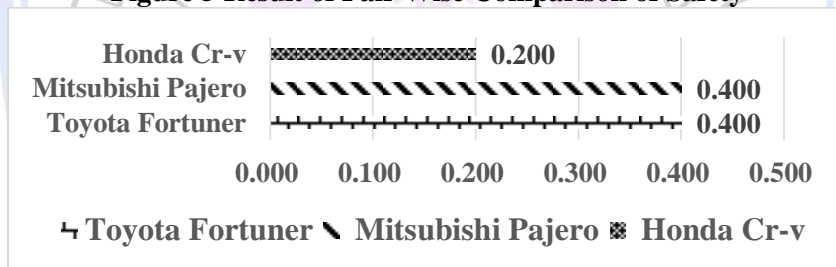**Figure 4. Result of Pair Wise Comparison of Quality**

Source: Data Processed, 2016

In Figure 4 about quality shows that Mitsubishi Pajero is the most preferred by respondent (0.443), second is Fortuner (0.387), followed by Cr-v with the lowest score by respondents (0.170) and the overall inconsistency for result of quality is (0.009), it means the data comparison by respondents is valid and consistent.

Result of Pair Wise Comparison of Safety
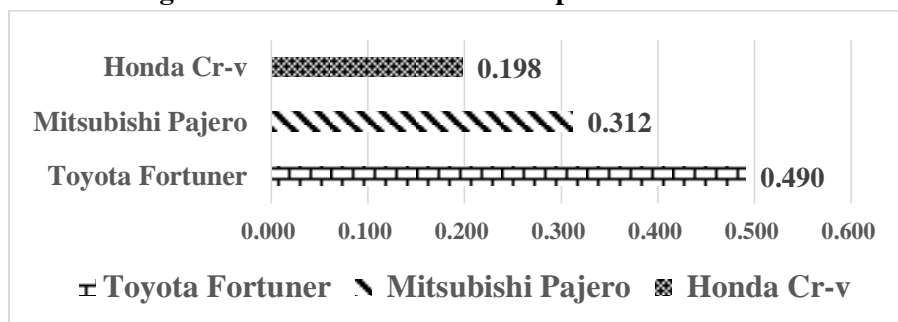**Figure 5 Result of Pair Wise Comparison of Safety**

Source: Data Processed, 2016

In Figure 5 about safety shows that Pajero and Fortuner has the same result (0.4), followed by Cr-v (0.2) and the overall inconsistency for result of safety is (0), it means the data comparison by respondents is valid and consistent.

Result of Pair Wise Comparison of Interior
**Figure 6 Result of Pair Wise Comparison of Interior**

Source: Data Processed, 2016

In Figure 6 about interior shows that Fortuner is the most preferred by respondent (0.49), second is Mitsubishi Pajero (0,312), followed by Cr-v with the lowest score by respondents (0,198) and the overall inconsistency for result of interior is (0.026), it means the data comparison by respondents is valid and consistent.

Result of Pair Wise Comparison of Comfortable

**Figure 7. Result of Pair Wise Comparison of Comfortable**
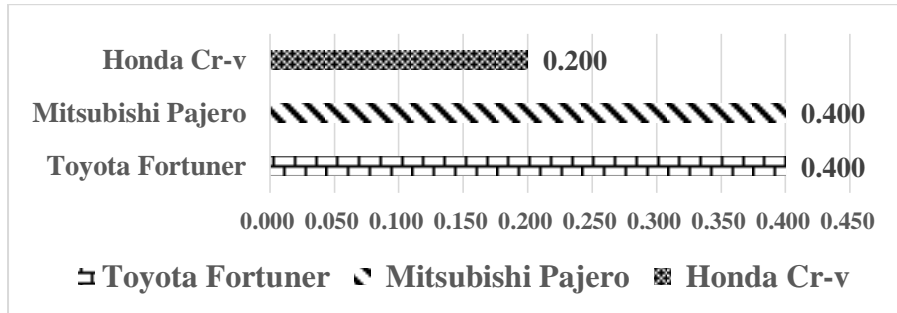
Source: Data Processed, 2016

In Figure 7 shows that Pajero and Fortuner has the same result (0.4), followed by Cr-v (0.2) and the overall inconsistency for result of comfortable is (0), it means the data comparison by respondents is valid and consistent.

Result of Pair Wise Comparison of Advertisement

**Figure 8. Result of Pair Wise Comparison of Advertisement**
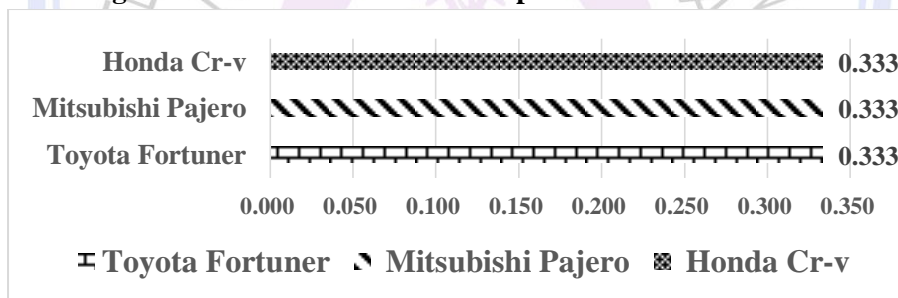
Source: Data Processed, 2016

In figure 8 about advertising shows that Honda Cr-v, Mitsubishi Pajero and Toyota Fortuner has the same result (0.333) and the overall inconsistency for result of advertisement is 0, it means the data comparison by respondents is valid and consistent.

Result of Analytical Hierarchy Process of Consumer Preferred SUV cas

Figure 8. Result of AHP (Best SUV Car)
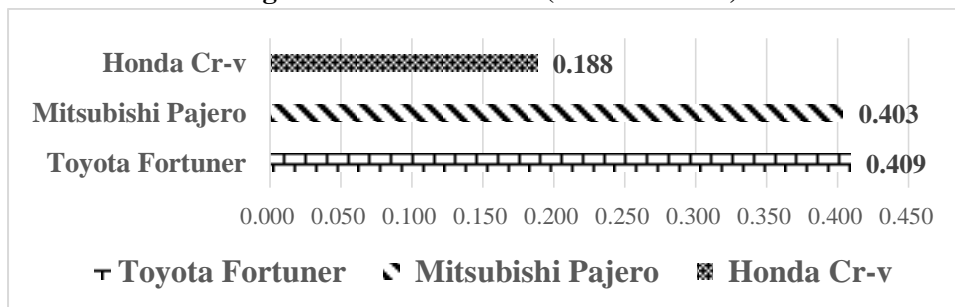
Source: Data Processed, 2016

In Figure 8 about result of AHP the best SUV car shows that Fortuner have the highest score with 0.409, in the second position is Mitsubishi Pajero with score 0.403, and followed by Cr-v in the last position with score 0.188. In this result the overall inconsistency indicated = 0.045, it shows that the comparison of data in this research is valid and consistent

Discussion

Firstly, for the overall of main criteria (price, quality, safety, interior, comfortable, advertising), based on (Figure 4.1) the most important criteria that influence customer is safety with total score 0.329. When choose a car, people must give an attention about the safety, because it concern with the people life. People will choose the car that have a safety assurance, and also already pass a safety test. The respondents are those who already have an experience on each alternative provided which are the three SUV cars based on the requirement of using AHP method. So in this research, according to the respondent, safety become the most preferred factor for the costumer in selecting the preferred SUV cars in Manado.

Second is quality with total score 0.175. Every people want a product with a good quality. Before they buy something, they will make sure that the product have a good quality, so it can durable for a long time. Consumer will choose a product with affordable price and good quality as well.

Third position is comfortable (0.167). In selecting a car, people also tend to choose a car with comfortable seat. It will make them enjoy the trip. Usually when launch new car, company will held test drive and let the people try to drive the car, to see the interior inside, feel the comfortable seat, and make sure a quality of the machine. It can convenience customer to buy a car.

Next position is price with score 0.165. Have low price does not mean that the cheap one do not have good quality, so people nowadays look goods with low price and have good quality. In fifth place with score 0,122 is interior. Every type of car has a different interior design. There are standard and luxurious interior. Interior mostly being concerned by young people. They tend to choose a car with good interior.

Next is car advertising that have score (0.043). The primary function of advertising is to persuade people to buy something. Advertising also is a media to introduction a new product to a consumer. Car advertising was made as attractive as possible to attract consumer attention, and to reassure consumer that the product is good and there are some people buy a product just only an attractive advertising .Some customer will remember the brand and their advertising in TV or other social media.

Based on the overall data, customer will choose Toyota Fortuner as the preferred SUV cars in Manado compares to the rest of alternatives. This result already shown in Figure 4.11, it shows that when people want to buy a car, they prefer to choose Fortuner as the most preferred SUV cars among the other alternatives. These three SUV cars produced from different brand that is Toyota, Mitsubishi and Honda. Fortuner is a product from Toyota. From the data, Toyota became the most favorite brand in Indonesia. For a safety car, Fortuner quite reliable with features offered such Dual SRS airbag, Vehicle Stability Control (VSC), Hill Assist Control (HAC), and Isofix with Tether Anchor (International Standard for Child Safety).

Therefore, Toyota Fortuner is the most preferred than Mitsubishi Pajero and Honda Cr-v. Fortuner got highest with (0.409), followed in the second place by Mitsubishi Pajero with score (0.403), and in the last place is Cr-v with score (0.188). The overall inconsistency indicated = (0.045), it shows that the comparison of data in this research is valid and consistent. Based on the result above, there's a similarity of this research result with a previous research by Anandh and Sundar (2014). The result that the criteria on comfortable is on the top three for the consumer preference in choosing a car.

CONCLUSION AND RECOMMENDATION

Conclusions

Based on the overall result that developed using Analytical Hierarchy Process (AHP), the conclusions drawn from this research are as follows:

1. Based on six criteria (price, quality, safety, interior, comfortable, advertising), there are top three criteria that has the highest influence for consumer to choose SUV cars in Manado city. In the first place and got the highest total score goes to safety. According to the data comparison that developed in pairwise comparison of Analytical Hierarchy Process (AHP), safety become the most preferred criteria for consumer when choose SUV cars in Manado city. Second position of the highest score goes to quality with total scores.

Third position is for a comfortable. The data show that safety, quality, and comfortable are the most important thing that influence consumer to choose a SUV cars. The rest criteria there are price, interior, and advertising is the main thing that influence the consumer.

2. Toyota Fortuner become the most preferred SUV cars by the consumer with score, followed by Mitsubishi Pajero and Honda Cr-v in the last place with score.

Recommendations

The recommendations for other SUV car brand that can be concluded from the overall result in this research are listed as follow:

1. Safety, quality, and comfortable are the most important things that influence consumer in selecting a SUV cars particularly in Manado. Therefore, every car company in Manado have to pay attention seriously toward this factor. Consumer will seek an SUV car with a good quality and best safety for the product. Actually, Fortuner and Mitsubishi Pajero has the same specification, the different is Fortuner launched by Toyota and Pajero launched by Mitsubishi. From the data, Toyota is the most preferred brand for consumer. That is why Fortuner more preferred than Mitsubishi Pajero and Cr-v in this research.

2. Mitsubishi Pajero and Honda Cr-v as the competitors of Toyota Fortuner, have to improve their performance that can attract more customer, especially for some criteria that make customer tend to choose Toyota Fortuner.

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