# MEASURING SERVICE QUALITY USING ANALYTICAL HIERARCHY PROCESS (AHP) IN THE LIFE INSURANCE INDUSTRY IN MANADO

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***ABSTRACT***

*Life insurance industries become a very competitive and attractive. They not only focuses product but focus on maintaining service quality especially in manado. There two major life insurance in manado that is PT. Allianz life insurance and PT. Prudential life assurance. Each life insurance must to survive and gain profit through satisfy their customer in different way. This study aimed to find out who is the performer life insurance in relation with service quality using analytical hierarchy process and to identify the strength and weaknesses point of each life insurance trough the questioner that given to the customer that have experience with those two life insurance.AHP is a method for ranking decision alternative and selecting the best one when the decision maker has multiple objectives, or criteria, on which to base the decision. The result shows that the best performer life insurance relation with service quality in manado is Allianz. Overall the criteria that given Allianz is the best performer life insurance in relation with service quality measurement model and the most preferred life insurance over Prudential. Since Allianz as the best performer in service quality but not consistently, Allianz has keep maintaining their performance in services so that they can keep dominate the market. And Prudential has to re-evaluate, find innovative products and gave the best service to the customer.*

***Keywords:*** *service quality, life insurance, analytical hierarchy process*

## INTRODUCTION

### Research Background

In Thelife insurance industry, many companies competing to provide the best life insurance to the people. As the quality of life insurance is getting better, people's demand of a better quality also increase. It is hard for the company in this industry to compete since all of them provide the same policies and features. What makes them different is the quality of service that they provide and also the brand image. People who do not know about the quality of service that some company provide will choose to use the service based on the company brand. But sometimes a strong company brand it is not guarantee their have a good service because theirs many bad issue that happen in service of life industry like the service is different than the policy itself or the service that they gave it is not as promise. As quality of product and service has become more important in influence people's intention in selecting product and service, many companies are trying to improve the quality of their product and service in order to keep competitive in their industry. Most people are no longer concern about the price that product or service offer but more about the quality that it has. In service sector especially, most companies are trying hard to provide service that will satisfied the customer, when the customers feel satisfy with the service they will continue to use that service.

The purpose of this research is to upgrading the service quality to obtain customer satisfaction that could leads to customer loyalty and retention rates. However, the service quality perception result from comparison of customer perception results from comparison of customer expectations with actual service performance. How to measure service quality? According to Parasuraman et al (1988) there are five dimensions to measure service quality such as tangible, reliability, responsiveness, assurance, and empathy. Using the service quality dimensions, a comparative study of those two life insurance in Manado such as Allianz and Prudential this research want revile which life insurance have the best service and the point strength and weakness of the two life insurance.

**Research Objective**

This research objective is to find out the best service performer of the two life insurance and to identify the strength and weaknesses point.

## THEORETICAL FRAMEWORK

### Theories

**Nature of Service**

Service is any act or performance that one party can offer to another that essentially intangible and does not result in the ownership of anything (Kotler., 2001:444).In economies and marketing, a service is the non-material equivalent of a good. Service provision defined as an economic activity that does not result in ownership, and differentiates it from providing physical goods. It is claimed to be a process that creates benefits by facilitating a change in customer, a change in their physical possessions, or a change in their intangible assets.Kotler (2003:446), see that Services have four distinctive characteristics that greatly affect the design of marketing programs: intangibility, inseparability, variability, and perishability.

**Categories of Service Mix**

Kotler (2003:445) sees the service component can be a minor or a major part of the total offering. There are distinguishing five categories of offerings: Pure tangible good, Tangible good with accompanying services, Hybrid, Major Service wit accompanying minor goods and services and Pure Service.

**Quality of Service**

Quality is one of the competitive priorities which have migrated from the literature of manufacturing strategy to the service arena. In the service sector, the quality of service, one of the most dominantthemes of research in services, has become a strategic instrument for firms since 1990s The traditional conceptualizations of the service quality are based on the disconfirmation paradigm – perceived quality is viewed as the result of comparing particular performance with some kind of standard. Customer perceives services in terms of its quality and how satisfied they are overall with their experiences.

Service quality is most often conceptualized as the comparison of service expectations with actual performance perceptions (Zeithaml&Bitner: 2003:60).Gronroos (1984) defines service quality as the difference between service expectationsand perceived standard of delivery. He identified technical and functional quality as beingtwo principle components of quality. Technical quality is the relatively quantifiableaspects of a service received by interacting with organizations; examples being waitingtime at check-out counters and reliability of public transport services. Services alsohowever involve consumer-producer interaction, identifying the method of deliveringtechnical quality. This approach may be united in the concept of customer perceived service quality; whereby quality can only be defined by customers, occurring when an organization supplies services to a specification satisfying their needs.

**Insurance as a Service**

The term insurance can be defined in financial as well as in legal terms. The financial definition deals with the funding or financial arrangement of the losses whereas the legal definition deals with provisions relating to legallyenforceable contract.The insurance has the following characteristics, which are observed in case of life, marine, fire and general insurance. Sharing of risk - Insurance is a device to share the financial losses which might befall on an individual or his family on the happening of a specified event. The event may be death in case of life insurance, fire in fire insurance etc. If insured the loss arising from these events will beshared by all insured in the form of premium.

**Previous Research**

Malini (2012) conducted Study On Service Quality Measurement And Its Impact In Opting Insurance Companies byusing descriptive method.This study explained that Insurance is a policy from a large financial institution that offers a person, company, or other entity reimbursement or financial protection against possible future losses or damages. Themeaning of insurance is important to understand for anybody that is considering buying an insurance policy or simply understanding the basics of finance. Insurance is a hedging instrumentused as a precautionary measure against future contingent losses. This instrument is used for managing the possible risks of the future. Insurance is bought in order to hedge the possible risksof the future which may or may not take place. This is a mode of financially insuring that if such an incident happens then the loss does not affect the present well-being of the person or theproperty insured. The purpose of this study is to evaluate customers' general expectation and perception of insurersin terms of Services offered at the insurance service measurement and its impact. Thus, results of this study underscore the need for insurance providers to gear customer service and qualityimprovement efforts towards components of reliability. The study intends to promote a better theoretical understanding and recognition of the complexities to service quality and itsmeasurement. Today, insurance companies in India competing each other by providing exclusive services. But the challenges for insurance sector in India remains the same that is to bringinnovative services to clients while making them realize the value of those services provided. When clients realize that quality is something that cannot be compromised, an organization has tosurvive in the competitive market while managing high value service.

**Conceptual Framework**

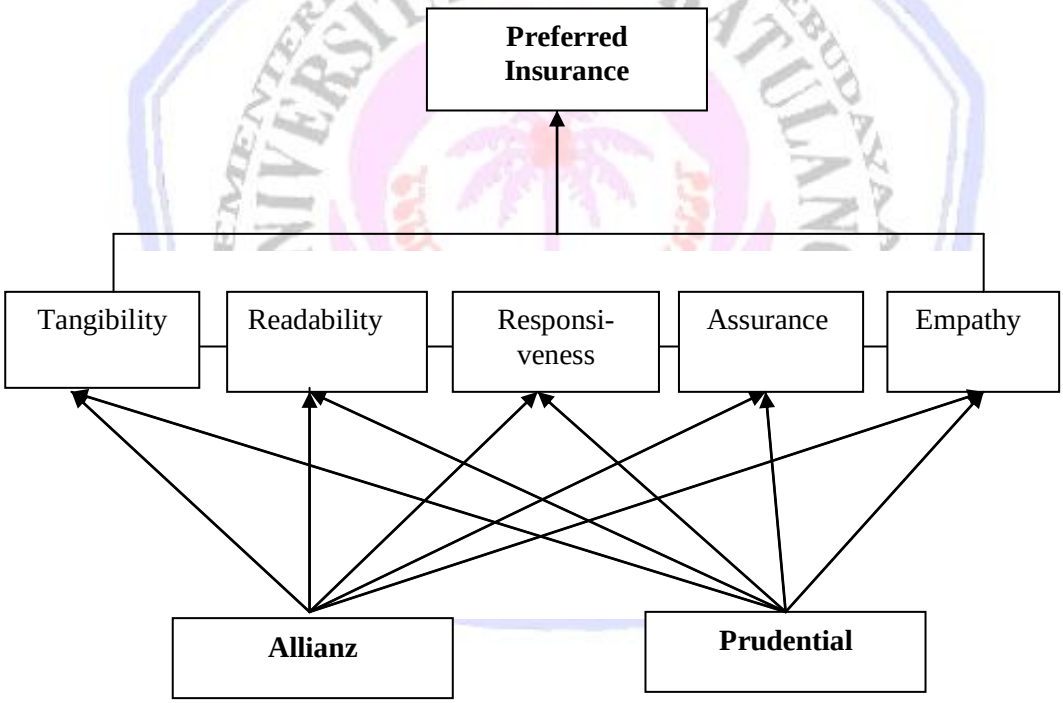


**Figure 1. Conceptual Framework**
*Source: Theoretical Review*

## RESEARCH METHOD

**Type of Research**

This research uses causal type of research where it will investigate the service quality of the two life insurance company. Causal research is a research study conducted to establish cause-and-effect of relationship among variables (Sekaran and Bougie 2009:110). Causal research, as the name specifies, tried to determine the cause underlying a given behaviour. It finds the cause and effect relationship between variables. It seeks to determine how the dependent variable changes with variations in the independent variable.

**Place and Time of Research**

This study was conducted in Manado between two months June-August 2013.

**Population and Sample**

Population is the aggregate of all the elements, sharing some common set of characteristic that comprises the universe for the purpose of the problem. The population of this research is all customers of the two life insurance in this case PT. Allianz Life Insurance and PT. Prudential Life Insurance in Manado. According to Sekaran and Bougie (2009:262) Sample is a subset or subgroup of a population. Based on that, this research sample is the customer of the two life insurance. And the sample of this research is 30 respondents who have sufficient experience of the two Life Insurance referenced in this research.

**Data Collection Method**

The data in this research are gathering from several kinds of sources that are relevant with this research.Primary data is obtained by questionnaire results from 30correspondence around Manado that is customer of the two life insurance.

**Operational Definition of Research Variable**

Service is an act rather than a specific item and its quality will be judged on not only the outcome (technical quality), but also on the process by which the services is delivered functional quality. And also this research method will is Analytical Hierarchy Process (AHP). The AHP is a method for ranking decision alternatives and selecting the best one when the decision maker has multiple objectives, or criteria. In the Analytical Hierarchy Process (AHP) the first step are specify an overall goal first the criteria and alternative that have an impact on the goal, or will help to achive that goal. *Alternative*:

1. PT. Allianz Life Insurance
2. PT. Prudential Life Insurance;

*criteria*:

1. Tangibility: Physical facilities, equipment and appearance of personnel
   a. Modern looking equipment
   b. Visually appealing physical facilities
   c. Visually appealing material associated with the service
2. Readability: Ability to perform the promised service dependably and accurately
   a. Show sincere interest in solving customer problem
   b. Provide their services as promised
   c. Performing service right the first time
3. Responsiveness: Willingness to help customer and provide prompt services
   a. Inform exactly when services will be performed
   b. Employees are never too busy to responds requests
   c. Prompt services to customers
4. Assurance: Knowledge and courtesy of employees and their ability to inspire trust and confidence
   a. Employees behavior instill customer confidence
   b. Employees are consistently courteous
   c. Employees have knowledge to answer questions
5. Empathy : individualized attention the firm provides for its customer
   a. Give customer individual attention
   b. Employees understand the specific needs of customer
   c. Having customers' best interest at heart.

**Data Analysis Method**

AHP (Analytic Hierarchy Process) is a decision support models developed by Thomas L. Saaty. This decision support models will describe the problem of multi factor or a complex multi-criteria into a hierarchy, according to Saaty (2008), the hierarchy is defined as a representation of a complex problem in a multi-level structure where the first level is the goal, which is followed by the level factor, criteria, sub-criteria, and so on down to the last level of the alternatives. With the hierarchy, a complex problem can be decomposed into their groups are then arranged into a hierarchy so that the problem will appear more structured and systematic.

**Validity and Reliability Test**

The reliability of a measure is established by testing for both consistency and stability. Consistency indicates how well the items measuring a concept hang together as a set, cronbach's alpha is a reliability coefficient hat indicates how well the items in set are positively correlated to one another (Sekaran and Bougie 2009:158). Since reliable scales are not necessarily valid researchers also need to be concerned about validity. It assesses whether a scale measures what is supposed to measure. Thus validity is a measure of accuracy in measurement (Hair et, al 2010:99).

**Analytical Hierarchy Process (AHP) Analysis Model**

The Analytic Hierarchy Process (AHP) is due to Saaty (2008) and is often referred to, eponymously, as the Saaty method. It is popular and widely used, especially in military analysis, though it is not, by any stretch of the imagination, restricted to military problems. In fact, in his book, (which is not for the mathematically faint of heart) Saaty describes case applications ranging from the choice of a school for his son, through to the planning of transportation systems for the Sudan. There is much more to the AHP than we have space for but we will cover the most easily used aspects of it.

**The AHP deals with problems of the following type.**

A firm wishes to buy one new piece of equipment of a certain type and has four aspects in mind which will govern its purchasing choice: expense, E; operability, O; reliability, R; and adaptability for other uses, or flexibility, F. Competing manufacturers of that equipment have offered three options, X, Y and Z. The firm's engineers have looked at these options and decided that X is cheap and easy to operate but is not very reliable and could not easily be adapted to other uses. Y is somewhat more expensive, is reasonably easy to operate, is very reliable but not very adaptable. Finally, Z is very expensive, not easy to operate, is a little less reliable than Y but is claimed by the manufacturer to have a wide range of alternative uses. (This is obviously a hypothetical example and, to understand Saaty properly, you should think of another case from your own experience.)
Each of X, Y and Z will satisfy the firm's requirements to differing extents so which, overall, best meets this firm's needs?. This is clearly an important and common class of problem and the AHP has numerous applications but also some limitations which will be discussed at the end of this section. Before giving some worked examples of the AHP, we need first to explain the underlying ideas. You do not need to understand matrix algebra to follow the line of argument but you will need that mathematical ability actually to apply the AHP. Take heart, this is the only part of the book which uses any mathematics.

**The Basic Principles of The AHP**

The mathematics of the AHP and the calculation techniques are briefly explained in Annex A but its essence is to construct a matrix expressing the relative values of a set of attributes. For example, what is the relative importance to the management of this firm of the cost of equipment as opposed to its ease of operation? They are asked to choose whether cost is very much more important, rather more important, as important, and so on down to very much less important, than operability. Each of these judgements is assigned a number on a scale. One common scale (adapted from Saaty) is:

**Table 1. The Saaty Rating Scale**

| Intensity of Importance | Definition | Explanation |
|---|---|---|
| **1** | Equal importance | Two factors contribute equally to the objective |
| **3** | Somewhat more important | Experience and judgement slightlyfavour one overthe other. |
| **5** | Much more important | Experience and judgement strongly favour one over the other |
| **7** | Very much more important | Experience and judgement very strongly favour one over the other. Its importance is demonstrated in practice. |
| **9** | Absolutely more important | The evidence favouring one over the other is of thehighest possible validity. |
| **2,4,6,8** | Intermediatevalues | When compromise is needed |

A basic, but very reasonable, assumption is that if attribute A is absolutely more important than attribute B and is rated at 9, then B must be absolutely less important than A and is valued at 1/9. These pairwise comparisons are carried out for all factors to be considered, usually not more than 7, and the matrix is completed. The matrix is of a very particular form which neatly supports the calculations which then ensue (Saaty was a very distinguished mathematician). The next step is the calculation of a list of the relative weights, importance, or value, of the factors, such as cost and operability, which are relevant to the problem in question (technically, this list is called an eigenvector). If, perhaps, cost is very much more important than operability, then, on a simple interpretation, the cheap equipment is called for though, as we shall see, matters are not so straightforward. The final stage is to calculate a Consistency Ratio (CR) to measure how consistent the judgements have been relative to large samples of purely random judgements. If the CR is much in excess of 0.1 the judgements are untrustworthy because they are too close for comfort to randomness and the exercise is valueless or must be repeated. It is easy to make a minimum number of judgements after which the rest can be calculated to enforce a perhaps unrealistically perfect consistency.

The AHP is sometimes sadly misused and the analysis stops with the calculation of the eigenvector from the pairwise comparisons of relative importance (sometimes without even computing the CR!) but the AHP's true subtlety lies in the fact that it is, as its name says, a Hierarchy process. The first eigenvector has given the relative importance attached to requirements, such as cost and reliability, but different machines contribute to differing extents to the satisfaction of those requirements. Thus, subsequent matrices can be developed to show how X, Y and Z respectively satisfy the needs of the firm. (The matrices from this lower level in the hierarchy will each have their own eigenvectors and CRs.) The final step is to use standard matrix calculations to produce an overall vector giving the answer we seek, namely the relative merits of X, Y and Z vis-à-vis the firm's requirements.

**Strengths and Weaknesses Of The AHP**

Like all modelling methods, the AHP has strengths and weaknesses. The main advantage of the AHP is its ability to rank choices in the order of their effectiveness in meeting conflicting objectives. If the judgements made about the relative importance of, in this example, the objectives of expense, operability, reliability and flexibility, and those about the competing machines' ability to satisfy those objectives, have been made in good faith, then the AHP calculations lead inexorably to the logical consequence of those judgements. It is quite hard – but not impossible – to 'fiddle' the judgements to get some predetermined result. (In MOA, it is impossible to do that.) The further strength of the AHP is its ability to detect inconsistent judgements.

The limitations of the AHP are that it only works because the matrices are all of the same mathematical form – known as a positive reciprocal matrix. The reasons for this are explained in Saaty's book, which is not for the mathematically daunted, so we will simply state that point. To create such a matrix requires that, if we use the number 9 to represent 'A is absolutely more important than B', then we have to use 1/9 to define the relative importance of B with respect to A. Some people regard that as reasonable; others are less happy about it.

The other seeming drawback is, that if the scale is changed from 1 to 9 to, say, 1 to 29, the numbers in the end result, which we called the Value For Money Vector, will also change. In many ways, that does not matter as the VFM (not to be confused with the Viable Final Matrix) simply says that something is relatively better than another at meeting some objective. In the first example, the VFM was (0.392, 0.406, 0.204) but that only means that machines A and B are about equally good at 0.4, while C is worse at 0.2. It does not mean that A and B are twice as good as C.

In less clear-cut cases, it would be no bad thing to change the rating scale and see what difference it makes. If one option consistently scores well with different scales, it is likely to be a very robust choice.

In short, the AHP is a useful technique for discriminating between competing options in the light of a range of objectives to be met. The calculations are not complex and, while the AHP relies on what might be seen as a mathematical trick, you don't need to understand the maths to use the technique. Do, though, be aware that it only shows relative value for money.

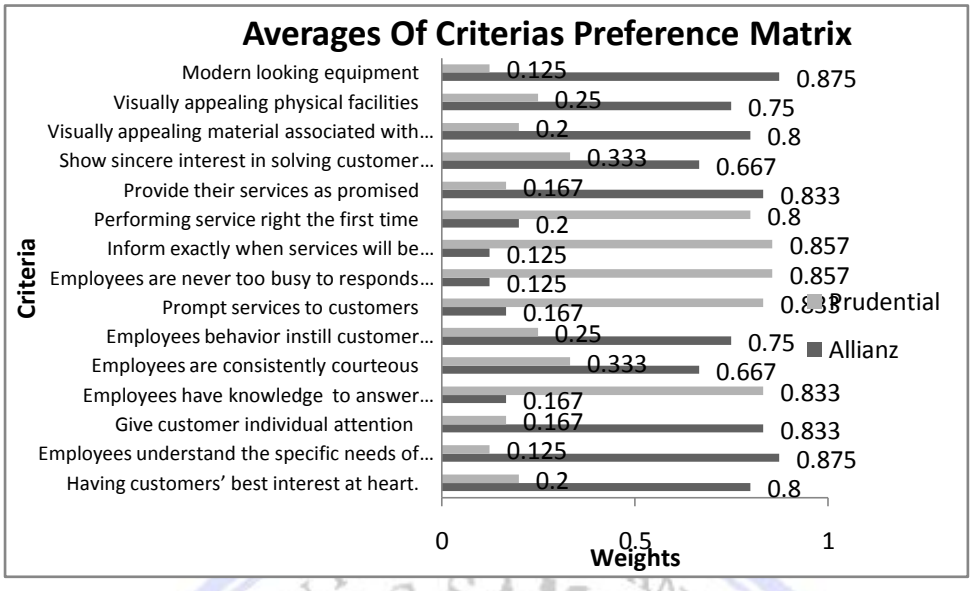


**Figure 2.** ***Averages of Criteria Preference Matrix***
*Source: Data Processed, 2014*

## RESULT AND DISCUSSION

### Result

### Pairwise Comparison

### Criteria Preference Matrix within Life insurance and Criteria

By comparing the two life insurance and normalized the matrix with row averages of PT. Allianz and PT. Prudential from the questioner that given to the customer that have experience with those two life insurance the next step is to indentifyThe averages of comparison of criteria preference vectors within each life insurance. Allianz conquest the entire criterion such as modern looking equipment, visually appealing physical facilities, visually appealing material associated with the service, show sincere interest in solving customer problem, provide their services as promised, employees behavior instill customer confidence, employees are consistently courteous, give customer individual attention, employees understand the specific needs of customer, having customers' best interest at heart. The second position is Prudential that conquest such as performing service right the first time, inform exactly when services will be performed, employees are never too busy to responds requests, prompt services to customers, employees have knowledge to answer questions as seen at figure 2 below.

Table 2 and Figure 3 shows that the normalized matrix for criteria or weight criteria. This is accomplished the same way when ranked life insurances within each criterion using pairwise comparisons. In this step, the criterion will be compared to other criterion. First, develop a pairwise comparisons matrix for the criteria from most important to least important. Then compute the normalized matrix by dividing each value in each column of the matrix by the corresponding column sum. Next, develop the preference vector by computing the row averages for the normalized matrix. Figure 5.1.22 obviously shows that provide services as promised is the highest priority criterion (0.1358) with employees behavior instill customer behavior (0.1351) in second position, followed by give customer individual attention (0.0974)And the least important is visually appealing material associated with services criterion with total score of (0.0169).

**Table 2.** ***Averages of Normalized matrix for Criterion with Row Averages***

| Criteria | Averages |
|---|---|
| Visually appealing material associated with the service | 0.0169 |
| Visually appealing physical facilities | 0.0283 |
| Modern looking equipment | 0.0294 |
| Employees are never too busy to responds requests | 0.0330 |
| Inform exactly when services will be performed | 0.0392 |
| Prompt services to customers | 0.0401 |
| Employees have knowledge to answer questions | 0.0515 |
| Employees are consistently courteous | 0.0679 |
| Performing service right the first time | 0.0746 |
| Show sincere interest in solving customer problem | 0.0753 |
| Employees understand the specific needs of customer | 0.0862 |
| Having customers' best interest at heart. | 0.0909 |
| Give customer individual attention | 0.0974 |
| Employees behavior instill customer confidence | 0.1351 |
| Provide their services as promised | 0.1358 |
| **Total** | **1.000** |

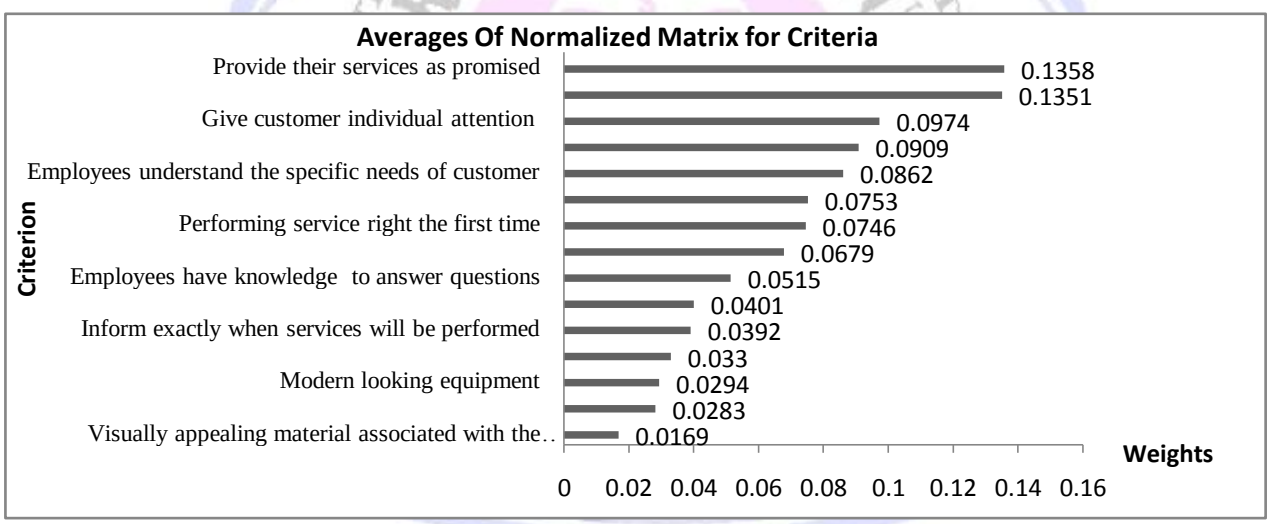


**Figure 3.** ***Averages of Normalized Matrix for Criteria***
*Source: Data Processed, 2014*

## Overall Criteria Weight and Consistency Index

The calculation and analyze above that are the averages of overall performance ranking of each life insurance according to service quality measurement shown on Table 3 and Figure 4. Clearly, based on scores developed by AHP Method positioned Allianz (0.6393) in the first place and Prudential (0.3629) in the second place.

**Table 3.** ***Averages of Overall Performance***

| | Overall Criteria Weight | |
|---|---|---|
| Insurance | Allianz | Prudential |
| Averages | 0.6393 | 0.3629 |

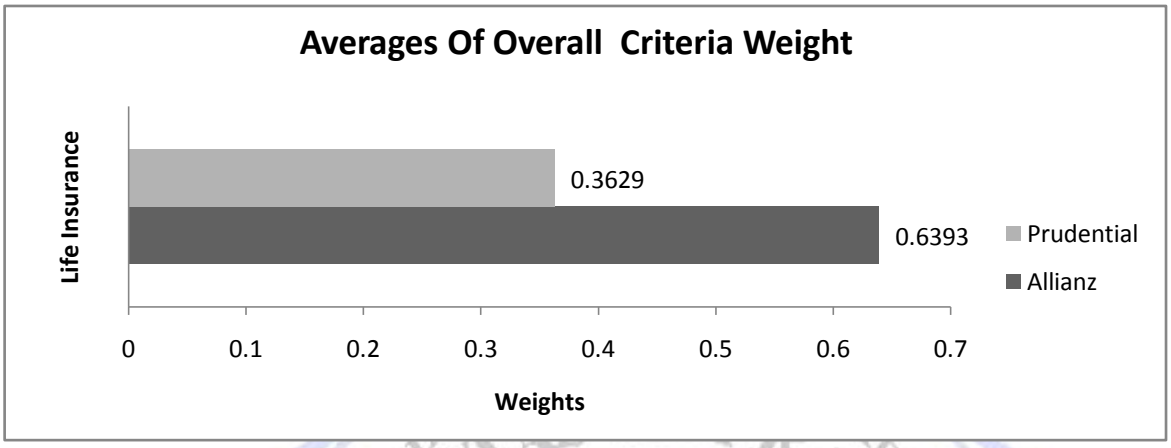


**Figure 4.** ***Overall Performance Ranking***
*Source: Data Processed, 2014*

**Consistency Index**

After establishing the overall ranking for each life insurance through Analytical Hierarchy Process, we need to indicate the degree of inconsistency AHP result. However, a consistency index (CI) can be measured the degree of inconsistency in the pairwise comparisons. To compute the consistency index, we need to check the consistency of the pairwise comparisons for the fifteen selected criteria. Table 5.33 shows example of calculation of consistency index. The preference vector is computed from the normalized matrix of criteria. The product resulted from multiplication of criteria matrix and vector. The averages ratios from product (3) divided by preference vector (2) is 21.30.

The consistency index is computed by following formula below and the result is 0.45. the next step is determining the degree of consistency index to random index. (RI). The degree of consistency index is 0.30.

**Table 4.** ***Consistency Index***

| **Criteria** | **(2)Preference vector** | **(3) Product** | **(3)/(2)** |
|---|---|---|---|
| Modern looking equipment | 0.0294 | 0.59 | 20.02 |
| Visually appealing physical facilities | 0.0283 | 0.62 | 21.91 |
| Visually appealing material associated with the service | 0.0169 | 0.34 | 20.31 |
| Show sincere interest in solving customer problem | 0.0753 | 1.56 | 20.64 |
| Provide their services as promised | 0.1358 | 3.17 | 23.34 |
| Performing service right the first time | 0.0746 | 1.42 | 19.06 |
| Inform exactly when services will be performed | 0.0392 | 0.79 | 20.06 |

| | | | |
|---|---|---|---|
| Employees are never too busy to responds requests | 0.0330 | 0.68 | 20.54 |
| Prompt services to customers | 0.0401 | 0.82 | 20.33 |
| Employees behavior instill customer confidence | 0.1351 | 3.09 | 22.83 |
| Employees are consistently courteous | 0.0679 | 1.58 | 23.25 |
| Employees have knowledge to answer questions | 0.0515 | 1.20 | 23.35 |
| Give customer individual attention | 0.0974 | 2.17 | 22.24 |
| Employees understand the specific needs of customer | 0.0862 | 1.81 | 20.94 |
| Having customers' best interest at heart. | 0.0909 | 1.86 | 20.50 |
| **Column sum:** | | | 319.38 |
| **Average** | | | 21.30 |

Consistency Index = $\frac{21.30 - n}{n - 1} = \frac{21.30 - 15}{15 - 1} = 0.45$

Degree of Pairwise Consistency = $\frac{CI}{RI} = \frac{0.45}{1.5} = 0.30$

**Discussion**

This research designed to find out the best performing life insurances in Manado limited to Allianz and Prudential using Analytical Hierarchy Process (AHP) and to identify the strength and weaknesses point of each life insurance. The questioners were distributed to get useful information in relation with service quality measurement to 30 respondents and have been analyzed by using Analytical Hierarchy Process in achieving the objective of this research.

**Pairwise Comparisons Criteria within Life Insurance**

The Analytical Hierarchy Process is a process that requires structuring the decision problem to demonstrate key elements and relationship that elicits judgments reflecting feelings or emotions, and whose judgments can be represented by meaningful numbers having ratio properties. These numerical representatives can be used to generate weights or priorities that represent the relative importance of decision criteria. Allianz is the highest rank for averages of modern looking equipment criterion than Prudential. Allianz dominate visually appealing physical facilities. The averages of visually appealing materials associated with services, which is dominated by Allianz then Prudential. In tangibility the respondent overall preferred Allianz. For the twelfth criterion that is knowledge to answer the question prudential is strongly preferred toward Allianz. In terms of assurance, the two life insurance employees or agencies have to know sufficient knowledge or wide knowledge about their company itself and they must have the courtesy and ability to convey trust and confidence from the customer.

The empathy of each life insurance as the part of employees' performance. The averages of give customer individual attentions, The averages of understand the specific needs of customers' criterion and the averages of having customers' best interest at heart criterion. Allianz dominated all the three criterion above over Prudential. In terms of empathy, the employees of the two life insurance should give the customer individual attention and understand what the customer needed. The averages of overall performance ranking of service quality dimensions of each life insurance such as tangibility, reliability, responsiveness, assurance and empathy, Allianz dominated the entire criterion followed by Prudential. Meaning that the application of service quality Allianz is better than Prudential in this research.

**Pairwise Comparison within Criteria**

Pairwise comparison within criteria are aimed to determine the relative importance or weight of the criteria, that is rank criteria from most important to least important. Figure 3 above clarifies the averages of overall ranking for criteria. The most important criteria in service quality measurement model is Provide their service as promised (0.1358) and followed by employees behavior instill customer confidence with score (0.1351). Give customer individual attention in third place with score (0.0974) and closely related to having customer best interest at heart (0.0909). Followed by Understand the specific needs of customer with score (0.0862), show sincere interest in solving customer problem (0.0753), Performing right at the first time (0.0746), consistently courteous (0.0679) and have knowledge to answer the question with score (0.0515). Followed by prompt service to customer (0.0401), inform exactly when services will be performed (0.0392) and never too busy to responds request with (0.033). The three least position from tangibility that is modern looking equipment (0.0294), visually appealing physical facilities (0.0283) and visually appealing material associated with service (0.0169) are become a consideration because each life insurance have almost the same products and services and high technology equipment.

**Consistency Index**

The Analytical Hierarchy Process is a mean of weighting or prioritizing impacts through systematic representation of a problem. Through pairwise comparisons, the relative importance, or weights, of different factors can be measured; tradeoffs between objectives are explicitly considered in these pairwise comparisons. One foundation of the AHP is the observation that human decision making is not always consistent. Consistency suffers when criteria being compared with subjective in nature. The AHP provides a standard by which the degree of consistency can be measured.

The consistency index of this research is CI = 0.45, if CI= 0, then Allianz would be a perfectly consistent in service quality application toward Prudential. Because CI > 0, then Allianz is not perfectly consistent, then the next step is to calculate the degree of inconsistency index that acceptable. An acceptable level of consistency is determined by comparing the CI to a random index (RI), which is the consistency index of a randomly generated pairwise comparison matrix. The RI values on the items only 10, that's why we use the maximum value of RI = 1.51. The degree of consistency in this research is CI/RI = 0.30. The degree of consistency is satisfactory if CI/RI < 0.10, since the result of Allianz is exceeds acceptable limits CI/RI > 0.10, the there are probably serious inconsistency. It means applying service quality we need to consider the actual service that given, needs and wants and the expectation from customer. Because Allianz position is not perfectly consistent (inconsistently) each life insurance could be the leader since the customers concern on maintaining service quality.

## CONCLUSION AND RECOMMENDATION

**Conclusion**

The conclusions of this study are:

1. The best performer life insurance in relation to service quality measurement model (tangibility, reliability, responsiveness, assurance and empathy) in Manado, by using Analytical Hierarchy Process is Allianz and second position is Prudential.
2. The strength and weakness point in Overall the criteria that given, Allianz is the best performer in relation with service quality measurement model and the preferred life insurance over Prudential. Allianz prevailed the entire criteria given which are become its strength point, modern looking equipment, visually appealing physical facilities, visually appealing material associated with the service, show sincere interest in solving customer problem, provide their services as promised, employees behavior instill customer confidence, employees are consistently courteous, give customer individual attention, employees understand the specific needs of customer and having customers' best interest at heart. And Prudential dominated the other criteria like performing service right the first time, inform exactly when services will be performed, employees are never too busy to responds requests, prompt services to customers and employees have knowledge to answer questions.

**Recommendations**

The recommendation on this research:

1. Managing quality of service is an important strategy for running business, there is no existing standard or consistent measurement of service quality. As the most preferred life insurance in relation of service quality measurement, Allianz should give more attention to improve their service to the customer and always understand what are that customer needs and wants and know what are that customer expect from the company. And Prudential have to improve their service and make some research for new innovative products and service so they can compete with other life insurance company.
2. Because the inconsistency of Allianz as the most preferred life insurance, Allianz has to continually re-evaluate their service so they can become consistently and dominated the market of life insurance. And the most important criteria is provide services as promised. This is very important for all Life insurance company, because sometimes their provide different service or the service that their gave to customer is different than the Policy. Every life insurance company should pay attention about this so they can't make their customer disappointed and lost trust.

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