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Information System Centralization and Donor Segmentation Mapping to Improve the Collection Performance of Islamic Philanthropy Institutions

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ABSTRACT

This research aims to identify the problems faced by zakat management institutions in prospecting donors. This research also aims to initiate an integrated application to support the donor prospecting process. This research uses descriptive analysis method with design thinking technique and application development mapping through product vision technique. Some of the problems of zakat management institutions lie in the limited human resources of the fundraising department in mapping donor segmentation. Some application features that can be developed are prospect features, donor data provision, general donor analysis, donor detail segmentation, and prospect information. The initiation of the application is expected to be able to help the funding department of philanthropic institutions in prospecting donors based on their segments.

Keywords : Segmentation, Donor prospect efficiency, Zakat management institution.

INTRODUCTION

Zakat is an obligatory instrument issued by Muslims because it is classified as one of the pillars of Islam. Zakat is a mechanism to bridge the gap between the poor and the rich and strengthen the economic independence of Muslim communities (Saad et al., 2014). The growth of zakat collection over the past few years still shows stagnation because its growth is still below 15%. The current increase in zakat growth is supported by the large number of existing muzaki. The number of individual muzaki who pay their zakat through zakat management institutions reaches 98% (BAZNAS, 2023). In addition, Indonesia is a country where the majority of the population is Muslim, reaching 86.7% of the total population of Indonesia. Therefore, offering zakat payment through institutions to individual muzaki is very important to increase the growth of zakat collection in Indonesia.

Optimizing zakat collection on individual muzaki can be done if the institution knows the preferences and also the determinants of muzaki's zakat behavior. Non-profit organizations such as zakat management institutions must be able to identify and analyze donor market segments (muzaki) thoroughly rather than viewing them as the same group (Hou et al., 2014; Terech, 2018). The key to this optimization strategy is to focus on focused messages (offers) that match the desires and preferences of each segment (Hou et al., 2014; Kemp et al., 2013). Segmentation can be done for cost-efficiency purposes in the market research of charity organizations such as zakat management institutions. This strategy can save funds and reduce the risk of wasting resources on unfocused and ineffective advertising.

Furthermore, in this era of digital transformation, zakat management institutions must also strive to maintain muzaki trust because trust in institutions also has a direct impact on the intention to channel donations through institutions (Alhidari, 2014). One of the issues that can affect donor trust in giving zakat or donating is the issue of donor personal data security. The development of existing information technology systems can provide challenges due to interconnection networking that allows the distribution of information and data from information users to information providers (Yuniarti, 2019). Donor data security risks can cause losses to each party. During the third quarter of 2022, Indonesia became the country with the highest number of data leak cases in the world. There were 12.74 million accounts that experienced data leaks in Indonesia (Surfshark, 2023). Consumer data leakage can occur due to internal and external factors. The Data Breach Investigations Report states that as much as 74% of data leaks involve the human element either by accident, stolen credentials, social engineering, or abuse of data privileges from employees (Verizon, 2023).

Data leakage cases that occur due to internal factors or resources of zakat management institutions can have an impact on the trust and credibility of the institution. In the context of zakat management institutions, the credibility of zakat management institutions has a significant effect on the behavior of paying zakat (Azman & Bidin, 2015). In maximizing segmented donation offers and reducing cases of data leakage due to internal factors, the initiation of the information system can be an effort in achieving these goals.

LITERATURE REVIEW

The Development of Zakat Collection in Indonesia

The development of zakat collection and distribution in Indonesia began since the establishment of the Minister of Social Affairs Decree No. 19 of 1998 which states the authorization of the community to organize social welfare services for the poor to collect funds as well as receive and distribute zakat, infaq, and sadaqah (ZIS). Furthermore, the birth of Law No. 38 of 1999 on Zakat Management and then followed up with the Decree of the Minister of Religious Affairs (KMA) No. 581 of 1999 on the Implementation of the Zakat Management Law, as well as the Decree of the Director General of Bimas Islam and Hajj Affairs No. D/291 of 2000 on Technical Guidelines for Zakat Management have encouraged the birth of various Zakat Management Institutions (LPZ) in Indonesia. This Zakat Management Institution was born as an effort to optimize the potential of zakat in Indonesia.

The main role of zakat collection by amil zakat institutions is to collect zakat from individuals, companies, institutions, and organizations. In fundraising efforts, the fundraising department can carry out creative marketing strategies to offer zakat distribution programs to mustahik. This fundraising role is in accordance with PSAK 109, DSN MUI provisions, and BAZNAS regulations carried out with the scope of amil who are entitled to receive and distribute zakat only Sharia amil entities or institutions.

Along with its development, the zakat collection program in general can be in the form of calculating zakat obligatory assets, zakat collection methods, promotion of zakat collection, protection of collected zakat, and accountability for muzaki (Ahmad Hudaifah et al., 202x).

Donor Segmentation in Institutions Zakat Management Institution

Market segmentation is a determinant of marketing success. Segmentation is fundamental in the process of matching the wants and needs of customers and the organization's ability to provide services to them (Malcolm McDonald et al., 2003).

The initial premise in conducting market segmentation is the assumption that the market is not completely homogeneous. Market segmentation is done for the purpose of finding product opportunities or areas for product repositioning and creating better advertising messages to customers (Beane et al., 1987).

In the context of nonprofit organizations, the need to better understand the determinants of individual donation behavior occurs because of the traditional reliance on individual donors. Traditional approaches to market segmentation by fundraisers can be based on type of gift (money, assets, or bequests), amount of gift, temporal dimension, type of giver (individual or corporate), giving capacity, past behavior, geographic, gender, age, and other demographic differences (Harvey, 1990). In other words, segmentation can be divided by geographic, demographic, psychographic, behavioral, benefit, and purchase (Beane et al., 1987).

Segmentation identification using mixture models assumes that the population consists of a finite set of classes with unknown proportions. Each class or segment is characterized by a population whose year-to-year contribution is dynamic and governed by a Markov chain (Durango-Cohen et al., 2013). The number of segments and their characteristics are determined based on response data (Michel Wedel & Wagner A. Kamakura, 2000). In addition, there is segmentation with the a priori segmentation model. The a priori segmentation model has determined the number and type of segments in advance. From this, it can be seen that market segmentation efforts can be carried out by looking at historical data as well as predetermining the number and type of segments.

Efficiency and Productivity of Institutions Zakat Management

Zakat management institutions in Indonesia have diversity in terms of institutions. In its development, zakat management institutions are not only managed by the government, but also the private sector. Zakat management must implement a good system so that the resources owned by the institution can be optimized. The indicator of good management is efficiency. The greater the impact given in the implementation of the collection, management, and distribution of zakat, the greater the efficiency of the zakat management institution (Ichsan & Yumena, 2022).

The theory of efficiency is closely related to the theory of production and consumption in the realm of microeconomics. In the context of production theory, efficiency is achieved when a company is able to achieve maximum profit from its production process. Efficiency in consumption theory reflects the ability of consumers to optimize the level of satisfaction they get (Tuffahati et al., 2016).

Moreover, firm efficiency can be divided into two types, namely technical and allocative efficiency. Technical efficiency involves a firm's ability to produce outputs using a certain amount of available inputs. Meanwhile, allocative efficiency involves a firm's ability to optimize the use of its inputs by taking into account the price structure and production technology. Technical and allocative efficiency can be combined into the concept of economic efficiency. In this context, economic efficiency describes a firm's ability to reduce production costs to produce a certain output by considering the level of technology and prevailing market prices (Akbar, 2009).

METHODOLOGY

The data used in this paper is qualitative data sourced from various relevant literature and several existing sources and references. According to the Big Indonesian Dictionary, qualitative data is data that is not in the form of numbers obtained from recordings, observations, interviews, or written materials. Meanwhile, quantitative data is data that can be measured or calculated directly as a number or number variable. The sources used include data from the Ministry of Environment as well as journals and books that are in accordance with the issues raised.

The research method used is descriptive analysis. Descriptive analysis is a method of examining the status of a group of people, an object, a set of conditions, a system of thought or a class of events in the present (Sugiono, 2005: 21). The data to be analyzed is data sourced from literature studies. Literature study is a series of activities related to library data collection methods, reading and recording and managing research materials (Zed, 2008: 3).

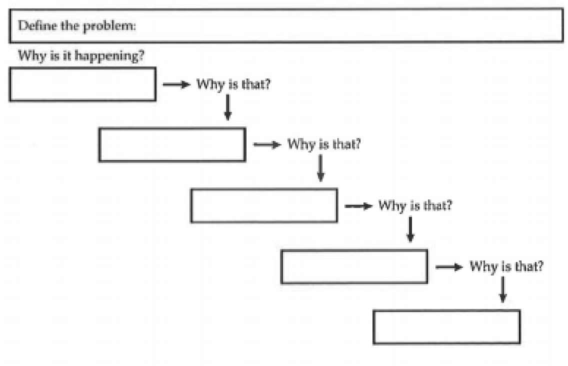

Figure 1. 5 whys root cause analysis

To get detailed information related to the problems to be solved in this research, the 5 whys root cause analysis method is used so that researchers can get deeper into the root of the problems faced by philanthropic institutions in Indonesia.

Then after knowing what the problem is, then researchers try to map solutions using design thinking techniques and application development mapping as a solution to the problems raised in the background of this research. The application development mapping carried out in this study uses the product vision technique with several variable adjustments as support to describe in more detail the innovation of the given background.

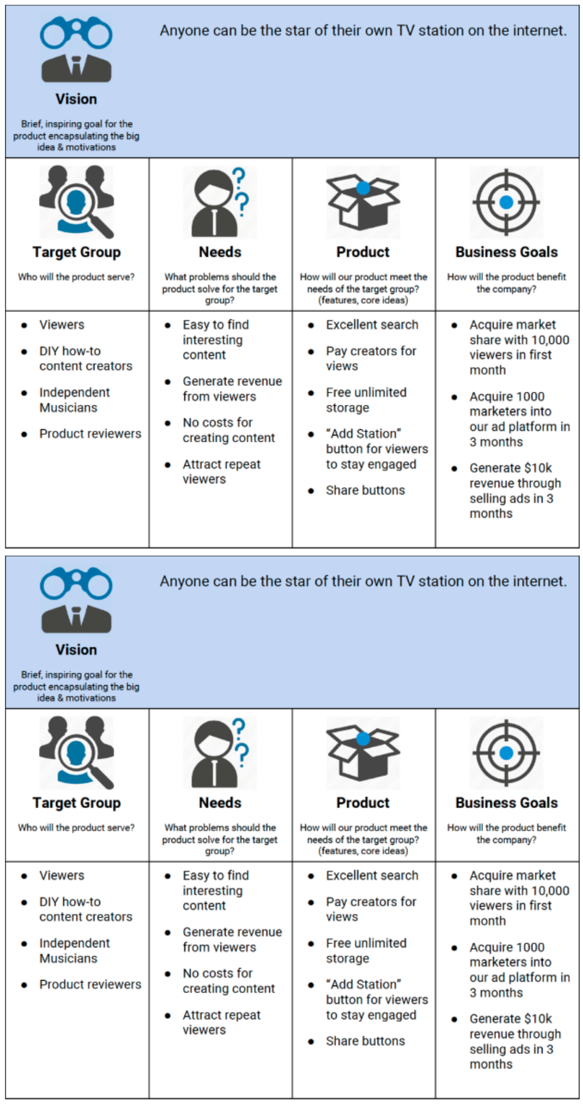

Figure 2. Product vision board

Product vision board as one of the tools used to map the goals of application/product development outlines five variables, namely the vision of the product itself, then the target group that will be the user of the application to be developed, then the variable needs that describe what the user wants to be able to solve the problems they face, how the product/application developed can meet the needs of the user, and the last is how application/product development can have an impact on organizational goals.

FINDINGS

Target Group

The obstacles obtained after making a problem breakdown are related to the inability of human resources in the fundraising department to create a mapping of institutional donor segments which is also caused by limited processing time and data availability to be processed into a segment map.

Therefore, the development of this application and system is intended to be used by the Fundraising team of philanthropic institutions, later the fundraising team will get general information related to who they will offer donations and what their characteristics are based on historical data obtained from past bidding and donation efforts.

In addition to the fundraising team, this application is also intended for the market research, service, and business analyst teams, and several other parts related to customer analysis. Through more in-depth analysis, it is hoped that the Institute will be able to provide the best offer to the community as an incentive for them to donate.

Product (Feature Development)

This application develops several supporting features for users to get the information and ease of bidding they need. Some of the features developed include:

1. Prospect feature

   This application not only provides information related to the donor segmentation of the Institute, but also provides convenience services for the fundraising team to make offers directly on the application. The provision of this feature can shorten the bidding business process carried out by most of the fundraising teams of Islamic philanthropy institutions in Indonesia to be more efficient because the fundraising team no longer needs to match data in excel to prospect. On the other hand, the provision of prospecting features in the application also increases the potential for data theft that may be carried out by fundraising HR with conventional systems because the HR team can no longer store donor data sets in excel files on their respective laptops.

2. Donor data provision

   In the application dashboard, the user will get data on the number of people who will be prospected that day which is obtained from the results of the algorithm carried out by the system, the user will only get donor information that they will prospect and cannot see donor data that is part of other fundraising HR. Overall data can only be accessed by users who have an administrator account, namely HR as part of middle management and low management HR who have a job description as market analysis or market research.

3. General donor analysis

   In addition to getting information related to donor data that will be prospected, users with regular accounts (fundraising team) can also see the data summary dashboard to get an overview of donors with what segmentation and behavior are currently donating at the Institute, this data is updated in real time in 1x24 hours so that users can really read the movement of donor segmentation at any time.

4. Donor detail segmentation

   This application reprocesses basic data obtained from donation history into patterns that can be classified into donor segmentation information. Donor classification in this application uses the RFM (recency, frequency, and monetary) method which is often used by a company to map which customers must be kept engaged with the company. The system will make calculations automatically based on the database owned from the data warehouse to be processed and presented the appropriate segment classification conclusion from the RFM calculation.

5. Prospect update information

   This application also provides features for users to be able to update data related to the bidding activities they do. Later the prospect information data that has been carried out by the fundraising team will become the basis for this application system to process data and map the type of donor segmentation, users can also provide more detailed data information related to information from the bidding activities carried out.

Data Analysis

In defining who donors will be prospected and providing donor segmentation classification so that offers are given according to their preferences, this application system uses the RFM segmentation technique.

The RFM model considers consumers' buying habits, including recency, frequency, and monetary values. It can help you identify your top customers to better advertise and market your products and services to them.

RFM, also known as RFM analysis, is a type of customer segmentation and behavioral targeting used to help businesses rank and segment customers based on the recency, frequency, and monetary value of a transaction. RFM marketing can help marketers and small business owners determine their target audience to use their budget most effectively.

This method gives customers scores based on 3 factors:

1. Recency
   Recency refers to how recent a customer's last purchase was. Customers who have made a recent purchase, typically within the last few weeks, still have the product and brand on their minds and are most likely to make a repeat purchase. You can measure recency however you deem necessary for your business. However, it's important to note that some companies might not have customers ordering every few days, weeks, or even months. For example, a car company might sell a single car to an individual within ten years.
2. Frequency
   Frequency is how often the customer makes purchases, which can help you identify repeat customers. For example, many clients make frequent repeat purchases within a set timeframe. Frequency is essential in determining the individuals most likely to continue shopping with your brand after their first initial purchase.
3. Monetary value
   Monetary value refers to how much a customer spends within a given period. It's always important to consider because it can tell you a few things about consumer behavior. For example, you might find that customers with the highest monetary value don't purchase items as frequently as others but typically buy the most expensive products when they do.

The values of each factor allow businesses to provide objective analysis and determine which audience to target for the most effective advertising and marketing campaigns. Most companies use a scale between 1 to 5, but you can use any values you think are necessary and helpful in evaluating clients.

Product Goals

This application system is expected to provide accurate information related to donor segmentation information and also provide up to date data. In addition, this application system also helps Islamic philanthropic institutions to be able to provide more security related to donor data security so as to increase the professionalism of philanthropic institutions in their management and operations.

IMPACT RESULT

The projection carried out in calculating the effectiveness of this application innovation is by looking at how the growth of the number of donors has donated to the philanthropic institution. The pilot project of this application starts in 2022, so the data to be used is data on the growth of the Institute's collection in 2022 and the growth in the number of old donors in the same year.

It is known that in 2022 the amount of collection that can be collected by the Rumah Zakat Institution has decreased by 7% with the number of old donors who donate decreasing by 10%. Whereas in 2023, it is known that there is an increase of 3% from the total set of the previous year and there is also an increase in the number of donors who donate again by 5%.

CONCLUCION

Operational efficiency of philanthropic organizations can be achieved through an integrated application system that provides features such as donor segmentation, donor data, and offers convenience in prospecting donors. These features can help the funding team in achieving fundraising efficiency. This system can also reduce costs and maintain donor trust by avoiding the issue of data leakage due to internal factors.

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