

# A Qualitative Study of User Retention for Businesses-A Data Science Perspective

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## ABSTRACT

User retention refers to a company's efforts and tactics for retaining existing consumers. User retention analytics facilitate these measures by providing predictive data of which consumers are likely to churn, allowing them to be ahead of the game. Since the mid-1990s, user retention has been a hot topic, but little research has been done on the process that leads to high retention rates. The relationship between user retention outcomes, budgeting and accountability, segmentation (targeting specific customers), and the presence of a well-documented complaints-handling process is investigated in this research.

**Keywords** : User retention; Complaint handling; Segment; Budget.

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## INTRODUCTION

Customer retention refers to a company's, business's, or product's capacity to keep customers for a set amount of time. Customers who use a product or service frequently return, continue to buy, or in some other way do not defect to another product or service, or do not use it at all. Now the question which arises is why we are trying to make an effort on retention over acquisition in a world where a huge amount of money and time is invested in acquiring new customers in a small time frame. The answer to this question is that for growth to be calculated in a long timeframe we require new as well as old users to be a part of the company, business or product [1]. The following paper discusses the relationship between high user retention, in relation to creating user segments, well documented complaint handling and the budget spent on it.

## USER RETENTION

### User Retention

For a long time, user retention has been proved to be a fundamental priority in organisations. User retention has

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been shown to have a number of economic benefits. As the amount of time a user spends with a product or business grows, the number of units purchased grows, and user referrals grow at a constant rate. Relationship maintenance costs fall as each user, supplier, and customer learn more about each other, resulting in fewer users churning and lower user replacement costs. Finally, existing users may have to pay a greater fee than newcomers. The following is an example of retention.

## Why User Retention

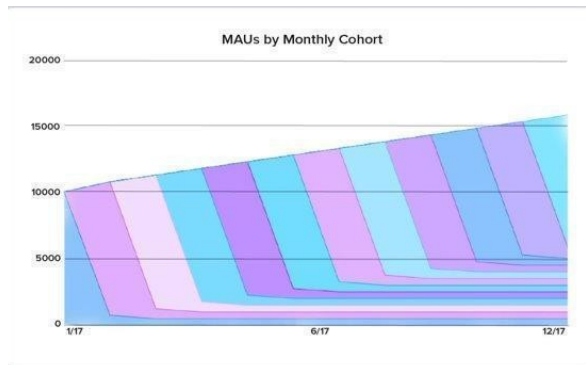


Figure 1: User Cohort 1

The user cohort is depicted in Figure 1; each hue represents a separate user cohort. We can observe that 10,000 new users joined in February by looking at the first purple cohort. However, after three months, barely 500 people had downloaded the programme. You may believe that the total number of users continues to rise each month; obviously, a 67 percent annual increase is a success. We can examine how user retention plays out if we prolong this for two years [2].

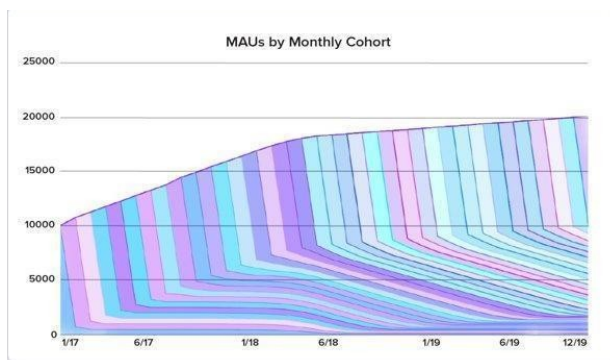


Figure 2: User cohort 2

User retention can be divided into 2 types i.e. user retention via Segmentation and user retention via Complaint handling mechanism.

## SEGMENTS

The idea behind segmentation is simple; instead of communicating with each individual in your audience, you group users according to similar attributes or needs. Each grouping becomes a segment. Once users are identified by a specific attribute or attached to a specific goal, the businesses can target the segments thus increasing user retention.

## Types of Segmentation

Following are the different types of segmentations that can be performed to increase the user retention.

**Demographic Segmentation:** By gender, age, occupation, marital status, income.

**Geographic Segmentation:** By location, i.e., country, province, state, city, town.

**Technographic Segmentation:** By technology used, i.e., browser, operating system, software, brand/model of device.

**Psychographic Segmentation:** By interests/likes, attitudes, values, personality traits.

**Behavioral Segmentation:** By action or inaction, spending/consumption habits, feature use, session frequency, browsing history, average order value, etc.

The fundamental advantage of segmentation is that it allows you to divide your audience into manageable groups based on shared habits or characteristics, allowing you to adjust your retention techniques to each group [3],[4].

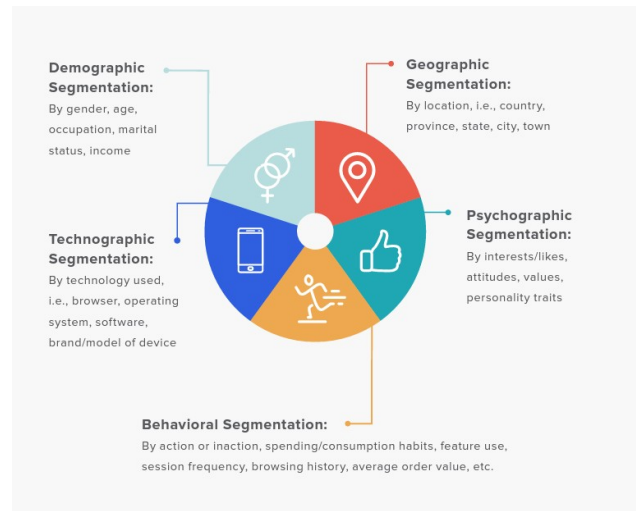


Figure 3 : Different Types of Segmentations

## User Retention Formula

The formula of user retention can be compared to the formula of profit and loss. The formula of profit and loss is  $\text{Profit} = \text{Selling Price} - \text{Cost Price}$ , if the result yields to be positive we have a profit if it yields to be negative it is a loss same goes for user retention where we shall calculate the total retention by subtracting the number of users we had at the start of the year with the total number of users we have at the end of the year; the formula will be as follows.

$\text{User retention} = \text{Users at start of year} - \text{Users at end of year}$

But here if the result turns negative the retention was successful, if it turns out to be positive the retention strategies were unsuccessful.

### COMPLAINT HANDLING MECHANISM

The word complaint handling refers to how a corporation handles client complaints. Criticism is expected to be assessed in a systematic and organized manner, and then used to make a good impact. It's also supposed to fix the problem that caused the client to complain. For these reasons, we decided to investigate the influence of established complaints-handling systems on user retention. First, determine whether a well-executed complaints- handling method is strategic in nature, as this will have a positive impact on user retention, and second, ISO 10002, which gives a documented guidance to the design and implementation of a solid complaints-handling method. The quality says that user loyalty is maintained or increased as a result of excellent complaint management [5].

### RESEARCH

The following section explains the research queries, methods used to collect the data and result of the research using the data science approach.

#### Research Queries

The main questions which will be answered in this research are as follows

- Do corporations that stand out in user retention have user retention methodologies set up?
- Do corporations that stand out in user retention have dedicated budgets for user retention activities ?
- Do companies that excel in user retention appoint a special person or group to be in charge of user retention?

#### Methodology

Our data collection methodology included the use of paperless survey forms i.e in this case Google forms which were sent out within a cluster of groups so as to get the most honest feedback possible. The following questions were asked within the forms.

- Does your company have a well-documented user retention methodologies set up (includes complaint handling and segments).
- Does the plan specify a budget for customer retention activities?
- Has your company appointed a particular person or a group to be responsible for customer retention?
- Does your company use any formal models to identify

customers who might take their business elsewhere in future?

- Does your company look for clues or signals to identify customers who might take their business elsewhere in future?
- Does your company have a documented process for handling customer complaints
- What percentage of consumers were kept by your organisations in the previous year who met your expectations? (1 -poorly performed , 4-met expectations , 7- exceeded expectations)

### Findings and Results

Following are the findings that were recorded via these surveys

Table-1: User analysis

Question No.	Responses		
	Yes	No	Maybe
a	47	36	17
b	41	42	17
c	49	51	-
d	44	56	-
e	27	73	-
f	40	60	-

For the "g" question following results were seen  
 27 people gave a response of "3"  
 26 people gave a response of "7"  
 12 people gave a response of "5"  
 10 people gave a response of "4" 11 people gave a response of "1" 8 people gave a response of "6"  
 6 people gave a response of "2"

Following results were collected (data collected from employees of different organizations)

Does your company have a well documented user retention methodologies set up (includes complaint handling and segments)  
 100 responses

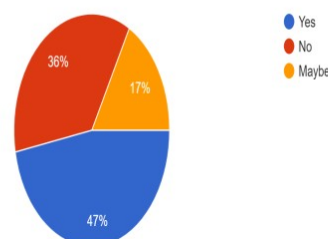
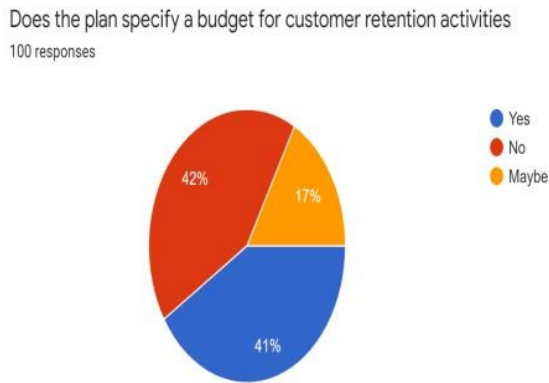


Figure 4: Analysis of User Retention Methodologies

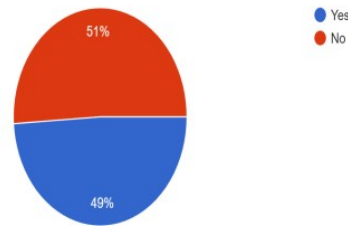
Figure 4 shows the analysis of user retention methodologies that can help organizations in retaining their customer and thereby increasing their overall growth thereby increasing profitability. Given that profit is an important aspect for any organization we have kept this question so as to understand whether organizations even have well documented user research methodologies or not, the results of which are discussed as follows. In Figure 1. We see that for the 1st question 47% of companies believe in and have employed user retention methodologies; 36% of respondents believe that their respective organizations do not have any user retention methodologies set up and the remaining 17% are not even sure if their organizations have or do not have any user retention methodologies set up.



**Figure 5:** Analysis of Corporations with Dedicated Budget

Figure 5 Shows the analysis of corporations with dedicated budget, budget is an important aspect whenever it comes to performing any task within an organization. The budget decides what will be the quality of the task being performed; If the budget of the organization for a particular activity is high it means the result will have quality which will be more or equal to the budget which is pumped in to make the activity, goal or task a reality and vice versa which is the reason we kept this question within our research the results of which are discussed as follows. In Figure 2. We see that for the 2nd question 41% of the respondents' companies provide a budget for retention activities. 42% of the respondents believe their organizations do not provide a budget for user retention activities and the remaining 17% are not even sure if their organizations provide or do not provide any budget for user retention.

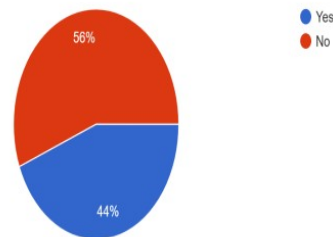
Has your company appointed a particular person or a group to be responsible for customer retention  
100 responses



**Figure 6:** User Retention Handling

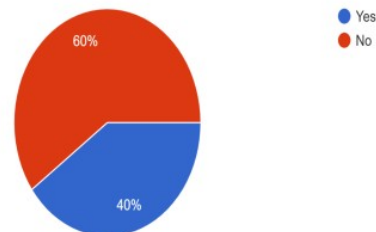
Figure 6 shows the user retention handling by appointing a person to do a particular task helps in distributing the task within an organization. It also helps the appointed person gain experience in that particular task thereby generating specialization in that particular field for that person which means the appointed person will do the task with minimum errors and maximum efficiency; the same goes for user retention activities which was the reason behind including this question within the survey. As we can see in Figure 3 for the 3rd question we get an almost equal response as to whether the companies have appointed a person or cluster for customer retention.

Does your company use any formal models to identify customer who might take their business elsewhere in future  
100 responses



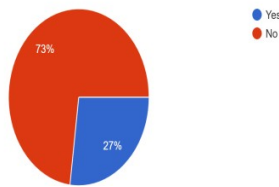
**Figure 7:** Business shifting analysis with model

Does your company have a documented process for handling customer complaints  
100 responses



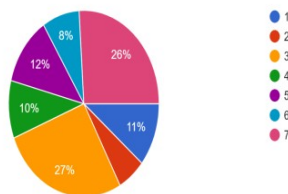
**Figure 8:** Documented process of handling business

Does your company looks for clues or signals to identify customer who might take their business elsewhere in future  
100 responses



**Figure 9:** Business Shifting analysis with signals

In the past 1 year what was the extent of customers retained by your organizations which met your expectations (1 -poorly performed , 4-met expectations , 7- exceeded expectations)  
100 responses



**Figure 10:** Overall analysis of user retention

When an organization fails in user retention activities, in that case the client, user or customer may want to identify new businesses which provide the same service as your organization. Failure in user retention can be because of a number of reasons some of which may include no or less than expected user satisfaction after using your organization's services. In such a case the organizations need to have formal models or methods to identify such customer so that they can stop such customers from leaving the organization's services and also create changes within the organization to avoid such consequences in future; Now we get the following results when we ask the same question. For the 4th question we get to know that 56% of the companies do not use any formal models for customer retention and the rest 44% do.

Prediction is the act of identifying something that is going to take place in the future. In the same way when we are running an organization we usually need to look for clues and create predictions on whether the client may or may not leave the organization for some other party providing a similar sort of service. Now in the survey we understand that most organizations precisely 73% of them in this survey do not use prediction models for customer retention and the rest 27% do use them.

Complaint handling is a mechanism where we are able to properly accept the client or customer

complaints and then respond to them as early and in as satisfying way as possible; Modern day examples of complaint handling mechanism systems are software's such as Jira or Zen desk and many more. The way these systems work is that first the client raises a complaint using these systems, these complaints or queries are called "tickets" then these tickets are handled by an appointed person or a cluster. What this helps in is that the consumer gets happy that their complaints are being heard and also that these complaints are arranged in such an order that they can be then referred to by the appointed person or cluster whose job it is to handle customer issues in future if similar issues ever arise. In the second last question we see that there are 60% of companies that have no process for handling customer complaints.

As we can see in Figure 7 at the end only 26% of employees of the organization's workforce feels that the customer retention has exceeded expectations.

## CONCLUSION

The aforesaid study leads to two conclusions: first, we observe that user retention is strongly linked to the presence of a recorded complaints-handling process, and second, most employees perceive that customer retention operations in their firms have lagged behind. The most important management takeaway from this analysis is to put in place a documented user criticism handling method that will identify and address the issues that cause users to outsource some or all of their business to competitors, as well as to have proper user retention methodologies in place.

## LIMITATIONS

The current research has two significant flaws. For starters, it was conducted in a specific geographic region, so the results may not be comparable across different geographies. Second, it relies on self-reports by executives in charge of user relationship management. The unnumbered footnote on the first page acknowledges that their self-reports have not been objectively validated.

## FUTURE SCOPE

Given the significance of this investigation, there is an essential question that can be investigated: Do companies with a standards-based complaint management approach have a greater user retention rate than organisations with either no complaints-handling technique or one that does not follow the



standard? This research has established a baseline against which improvements in complaint- handling methods and outcomes may be measured.

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