

Zillow Buyer/Seller Analysis & Recommendations

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# Introduction

Zillow Group Inc. runs the top real estate website in the world where homeowners, agents, and anyone looking to purchase or rent homes can connect and conduct business. The purchasing, selling, and renting of homes are coordinated by Zillow to facilitate sales of advertising spots and leads and generate commissions and interest. The website is made to cover all aspects of homeownership, including buying, selling, renting, and loan financing. Zillow’s mission is to arm consumers with the data and knowledge they need to make wise housing decisions. Zillow generates revenue primarily from three sources: Homes, Mortgages, and IMT (Internet, Media, and Technology)

## Primary Customers and Primary Competitors

Zillow is by far the most popular real estate website in the US, offering customers an on-demand experience and almost end-to-end service. The global value of real estate hit [$326.5 trillion](https://www.savills.com/impacts/market-trends/the-total-value-of-global-real-estate.html) in 2020, a 5% increase from the previous year. Specifically in the US, the commercial real estate market size is [$1.2 trillion](https://www.ibisworld.com/industry-statistics/market-size/commercial-real-estate-united-states/) in 2022. This number will only continue growing as the world population increases, demanding more properties to live and work in. This growth is good news for Zillow since it has maintained at least 10% of the industry’s total revenue opportunities and addressable market since it was founded. However, as more companies follow Zillow’s tech-savvy footsteps, competition will increase considerably.

The company allows buyers to look at property listings for free; it relies partly on ad sales to agents and related businesses to make money, known as an advertising revenue model. It offers various products for buyers, sellers, renters, and landlords. Thus, the company’s revenue is split into three segments: Home, IMT, and Mortgages. Not only does it make money from advertising, but it also charges a selling fee and interest on home loans.

Zillow has two distinct client segments that complement its objective to provide customers with high-quality real estate services – Service Consumers and Service Providers.

Zillow can be a valuable resource for buyers, sellers, and real estate agents alike. From listings to local market data to real estate leads, Zillow is like Google for housing. However, the site does have its shortcomings, despite bringing in a massive 36 million visitors per month. These 10 sites compete with Zillow – Trulia, Move, ForRent.com/Homes.com, Redfin, Apartments.com, MSN, Coldwell Banker, Movoto.com, and Century 21.

Chart, bar chart

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## 4Ps

In marketing strategy, the product is not viewed as a tangible product, but as a source of value to be delivered to the customers. Value to the customers of Zillow can be delivered in numerous ways such as – priming and pre-purchase education provided by sales staff, financing plans to purchase the products, word-of-mouth references, physical product, installation and repair services, quality-assuring brand name, the convenience of availability, point of sale equity, etc.

These numerous ways to understand product concepts provide marketing managers of Zillow an opportunity to differentiate its overall value proposition from that of the competitors.

**4 Stages of Product Management as part of the Marketing Process**

Identification of Opportunity – Market research and customer research are done to identify the needs of the customers that Zillow can cater to with its present and acquired resources.

Design and Testing – Product is designed based on the value proposition that customers are seeking and one that Zillow can deliver. The key consideration regarding product design and testing are – customer value proposition, regulatory requirements, Zillow skills and resources, opportunities for differentiated positioning, and profitability.

Zillow Zillow's Product Launch – It includes decisions regarding pricing, communication strategy, distribution channel management, and building infrastructure to provide post-purchase services.

Product Life Cycle Management of Zillow products – Once the product is launched the company needs to manage the life cycle of the product through its various stages such as – introduction, growth phase, cash cow stage, and finally decline stage.

# Research Problems

Marketing Problem: We intend to develop a marketing strategy that will help the Zillow to assist the customers in deciding the property price based on services they provide

Research Objectives:

1. Suggest/identify desirable neighborhood locations where consumers might purchase a property.

2. Identifying excellent feature attributes to promote and enhance sale listing while optimizing the seller's sale price

3. Suggest potential listing prices based on the neighborhood area listings

4. Suggest affordability price range for the buyer to buy a house in a neighborhood area based on the buyer's banking attributes (annual income, loan interest, etc.) – ACHIEVEMENT

5. Grow real estate network by 40%

6. Increase investment portfolio by 50%

7. Increase company profit by 50%

# Data Description

The dataset contains a full list of real estate properties in three counties (Los Angeles, Orange, and Ventura, California) data in 2016 and 2017.

All the properties with their home features: type of cooling system, the architectural style of the home, number of bathrooms and number of bedrooms, total living area, number of garages, number of levels, year built, tax amount, assessment year, transaction date are among few features listed (total 58 features), Location details (latitude, longitude, neighborhood, zip, city, county) area also included in the dataset.

# Analysis Methods & Results

## Understanding the Target Variable

**Target Variable** :

Logerror = log(Zestimate) - log(SalePrice)

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## Data Cleaning and Preparation

* Missing values
* Distribution of the numerical variables
* Outliers
* Distribution of the categorical variables

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Chart, histogram

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## Exploratory Data Analysis on Missing Values

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Distribution of Categorical Variables

Year Difference = Assessment Year - Year Built

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Chart, scatter chart

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## Multi-collinearity

Observation:

We observe a high correlation among some of the feature variables from the above correlation plot.

Due to repetitive data few columns are dropped that serve no useful purpose for the model prediction

The model is rebuilt by dropping these columns

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## Distribution of Discrete & Continuous Variables

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# Marketing Strategy Recommendations

* Every row entry is linked to location information, geolocation data attributes can be used to form clusters
* Feature Engineering to identify best house attributes to boost house sale
* Use Regression model for predicting sale price