

E-BUSINESS ANALYSIS OF REAL ESTATE COMPANIES

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ABSTRACT

We analyzed the e-business websites of Realestate.yahoo.com, Realtor.com, and Zillow.com. We looked at the similarities and differences between them and how e-business components help differentiate one company from another and the role this plays in contributing to their success. We looked at which business model components, such as value proposition, target customers, distribution channels, and revenue streams, are important. The type of e-business models each company used and the ones that are more successful were investigated. We discovered some similarities and differences; some differences were the use of revenue streams for generating multiple sources of revenue, the type of e-business models used and the role they play in executing the e-business strategy.

Keywords: Canvas Framework, Real Estate, Business Models, e-business, Analysis

INTRODUCTION

The internet's ability to provide access to information has improved real estate communications and business (Aalberts and Townsend, 2002). Business models represent the business logic of companies. They are executed by company websites and are important to the success of companies. E-business models represent the rationale of how companies create, deliver, and capture value (Linder and Cantrell, 2000). By understanding them, companies identify opportunities to improve the business (Osterwalder, 2004), so it is important to understand their role. The internet has changed the real estate business but the importance of e-business could be further developed Our principal research objective is to investigate the role that e-business models play in real estate. In pursuit of this objective, we look at the similarities and differences among e-business models and how they affect company success. We investigate the importance of four business model components--value proposition, target customer, distribution channel, and revenue streams--using Canvas Framework (Osterwalder, 2010). We also looked at the type of ebusiness models used by each company. The contributions of this work are 1) identification of the components of e-business models of industry leaders, which serve as benchmarks for competitors; 2) demonstrating that the use of e-business model components helps companies understand which ones contribute to company success: 3) elucidating the role that e-business components play in attracting customers; and 4) helping companies understand which type of ebusiness models works best.



The paper is organized as follows. Section 2 reviews definitions of e-business models, section 3 defines the types of e-business models and section 4 analyzes three e-business models. The paper ends with a discussion in section 5.

E-BUSINESS MODEL DEFINITIONS

The internet has enabled new ways to deliver customer value by using e-business models that change how companies operate. E-business enables traditional businesses to evolve to a hybrid brick-and-mortar/online model. E-business is an approach to expand traditional business models, increase markets, and grow revenue. Several definitions of e-business exist (Cagnina and Poian, 2009; Rappa, 2004; Osterwalder, 2010; Methlie and Pedersen, 2007). Timmers (1998) defines eleven generic e-business models, from e-shops and e-procurement to trust and other third-party services. Tapscott et al. (2000) propose a network-and-value-centered taxonomy with five types of value networks called "business webs," which differ in their degree of economic control and value integration. Weill et al. (2001) describe eight so-called "atomic" e-business models; each describes different ways of conducting business electronically. E-business initiatives are represented by pure atomic business models or by combining them. Applegate (2001) introduces six e-business models: focused distributors, portals, producers, infrastructure distributors, infrastructure portals, and infrastructure producers. Dubosson-Torbay et al. (2002) identify the principal dimensions--user's role, interaction pattern, nature of the offering, pricing system, level of customization, and economic control--for classifying e-business models. Rappa (2001) describes companies by their value proposition and ways of generating revenue. His classification has nine categories of e-business models: brokerage model, advertising model, infomediary model, merchant model, manufacturer model, affiliate model, community model, subscription model and utility model.

E-business models are comprised of a set of components so we need to choose the appropriate application framework to define the relationship between them. The growth of e-business has raised interest in transforming traditional business models to exploit opportunities through innovation (Pateli and Giaglis, 2003). The internet has changed the idea of a business model and this has practical implications for companies. Consequently, companies need to redefine customer value propositions, and their business model. Enhancing customer experience helps to reshape customer value propositions (Berman and Bell, 2011). Creating new digital capabilities helps to refine the operating model by leveraging information to manage organizations, and integrating and optimizing digital and physical components (Berman and Bell, 2011). Effective use of e-business models depends on the economic environment, market and industry conditions, and the internal and external factors of organizations. Internal and external factors affect the need for business model change. Internal functions include product/service innovation, performance and the availability of resources (Giesen, et al., 2009). Product and service innovation is a key driver of new e-business models, especially for companies introducing to the market new products or services that require new skills, and capabilities and processes that lead to new value propositions.



Financial performance and the availability of key resources are both drivers and enablers of business model innovation. For the e-business real estate industry, introducing new services such as mobile device applications and online property value analysis are considered internal factors. External factors include new entrants, competitors, customer preferences, customer segments, technology, regulatory/legal, and the business environment. When customer preferences for goods and services change, they force changes to the customer value proposition and the e-business model.

TYPES OF E-BUSINESS MODELS

There are four primary types of e-business models: web-advertising model, brokerage business model, virtual value-chain model and the diversified model. Web-advertising is an extension of the traditional media broadcast model where the broadcaster is a website that provides free content and services such as email, IM, and blogs, mixed with advertising messages in the form of banner ads. One of the most sophisticated forms of internet advertising is Google ad. Banner ads are a major source of revenue for broadcasters. The website platform is designed to attract users with free content, products, or services; it generates revenue by selling space to advertisers and is a popular and rapidly growing advertising model (Jansen and Schuster, 2001; Jansen and Mullen, 2008). Realestate.yahoo.com, Realtor.com, and Zillow.com use this model. The brokerage model brings brokers, sellers, and buyers together to do business. The broker charges a fee to at least one party involved in the transaction. Brokers connect consumers with retailers, businesses with each other and consumers with each other. In real estate, e-business companies enable the search for properties and provide brokerage services. Companies that use the brokerage model make money from commissions and service fees. The payment of commissions to brokerages is contingent upon finding satisfactory buyers, successful negotiations of purchase contracts between buyers and sellers, the settlement of transactions, and the exchange of monies between buyers and sellers. In this model, the median commission charged to sellers by listing agents is 6% of the purchase price and is shared between sellers. The virtual value-chain supports the traditional value chain and it has changed the way businesses operate (Rayport and Sviokla, 1995). The traditional value chain uses information for support but the virtual value-chain uses information as a value-creating opportunity where products and services are in the form of digital information delivered through information-based channels. The three sites under study use that model. The diversified model helps companies to expand their core business to related products and services. In this model, a parent company owns the network and the diversified model provides internally integrated product-service mix. The model has several merits, one of which is that it enables companies to reduce reliance on core products and spread their risk by moving into other markets and offering combined product-service packages. It offers opportunities to develop powerful brands and to acquire better corporate image. One drawback is that it requires more investment in new technology, as well as major cultural changes for providing diversified product/services instead of a single product/service. Diversifying the business introduces additional risks and this may explain why it is not used by any of the three sites.



ANALYSIS OF E-BUSINESS MODELS

We compare the business models of the top three e-business sites using Canvas Framework. We determined the popularity of the sites by the amount of business they generate and the percentage of visitors they attract (Top 20 real estate websites, 2012). We selected the sites because of their popularity and position in the industry (Ebiz/mba, 2012). They are representative of real estate sites that exhibit the core services such as mobile applications, advanced property searches, map interfaces, home alerts, demographics data, MLS listings, property listing prices, ability to contact agents, location searches, ability to save searches, advice forums, new property listings, and property value analysis. The sample includes sites that use web-advertising, virtual value-chain, or the brokerage model. Realtor.com has the ability to list properties worldwide.

The data in table 1 were collected in several ways. First, we performed online feature analysis of three sites by logging into them to discover the various features available to users and to assess their capability and user friendliness. Second, we analyzed business and technical reports (Zillow.com, 2012).

| | Zillow.com | Realtor.com | Realestate.yahoo.com |
|--------|-----------------------|------------------------------|---------------------------------|
| | | | Yahoo.com |
| Value | Newness: | Newness: | Newness: |
| Propo- | The users have the | DocuSign, the electronic | Realestate.yahoo.com Yahoo |
| sition | possibility to | signature provider, makes | real estate displays |
| | appraise the property | available DocuSign for | predominantly on the home |
| | values based on | Realtors. | page the user location once the |
| | undisclosed factors | Realtor.com launched the | client visits the website. |
| | using a proprietary | international version of the | |
| | algorithm called the | web site. | |
| | "Zestimate." | | |
| | Usability & | Usability & Performance | Usability & Performance |
| | Performance of | Realtor.com makes ongoing | The Yahoo real estate website |
| | Services: | and frequent changes to | actual search process is simple |
| | Zillow Mobile | improve its performance. | and straightforward. |
| | applications are easy | | C C |
| | to use and provide | | |
| | real estate data and | | |
| | information to users | | |
| | quickly and | | |
| | efficiently. | | |

Table 1: Business Models Comparison



| | Zillow.com | Realtor.com | Realestate.yahoo.com |
|-----------|-----------------------|-------------------------------|---------------------------------|
| | | | Yahoo.com |
| | Customization: | Customization: | Customization: |
| | This website | This website provides these | This website provides these |
| | provides these | features: establish an | features: establish an account, |
| | features: establish | account, login, MLS listing, | login, MLS listing, listing |
| | an account, login, | listing price, find an agent, | price, find an agent, location |
| | MLS listing, listing | location aware search, saved | aware search, saved search, |
| | price, find an agent, | search, advanced search, | advanced search, advice |
| | location aware | advice forum, new listing, | forum, new listing, home |
| | search, saved search, | mobile device application, | alerts, value analytics, map |
| | advanced search, | home alerts, map interface. | interface and demographics. |
| | advice forum, new | , 1 | |
| | listing, mobile | | Realestate.yahoo.com Yahoo |
| | device application, | | real estate does not have the |
| | home alerts, value | | mobile device application. |
| | analytics, map | | |
| | interface and | | |
| | demographics. | | |
| | demographics. | | |
| | Design: | Design: | Design: |
| | The website has | The website has superior | The website has superior |
| | superior design. | design. | design. |
| Target | Buyers, sellers and | Buyers, sellers, house | Buyers, sellers, house owners, |
| customer | house owners. | owners, brokers, agents and | brokers, agents and bank. |
| •••• | Brokers, agents and | bank. | |
| | bank. | | |
| Distribu- | Web sale, | Web sale, advertisement on | Web sale, advertisement on |
| tion | advertisement on | other Web sites, | other Web sites, newspapers. |
| channel | other Web sites, | newspapers. | |
| | newspapers. | | |
| Relation- | Personal services: | Personal services: | Personal services: |
| ship | agents, brokers and | NAR members, buyers, | Lenders, buyers and sellers |
| r | lenders advertising. | sellers. | forums. |
| | | | |
| | Automated | Automated services: | Automated services: |
| | services: | The users can access the | The users can access the |
| | The users can access | customized services. | customized services. |
| | the customized | | |
| | services. | | |
| | | | |
| | | | |



| | Zillow.com | Realtor.com | Realestate.yahoo.com |
|----------------------------------|---|--|---|
| Value configura- tion | Platform/ Network: The website continually improves. The company improved the Zestimate algorithm precision. | Platform/ Network: Realtor.com website continually improves. It has extended to Realtor.com International web site. | Yahoo.com Platform/ Network: The website continually improves. The company has also introduced a range of new features for real estate professionals. |
| Capability | Physical resources: Partner network. | Physical resources: Partner network.Human resources: NAR members. | Physical resources: Partner network. |
| Partner- ship | Acquisition of particular resources and activities: YahooReal Estate: partnership. Zillow Mortgage Marketplace has Distribution Partnership with Redfin.Mortgage Concepts, LLC. AmeriSave partnership. | Acquisition of particular resources and activities: The National Association of Realtors launched a partnership with Olinger Group. | Acquisition of particular resources and activities: Yahoo Real Estate and Zillow have entered into a partnership that will place targeted ads that real estate agents and brokers purchase from Zillow in property search results on both sites. |
| Revenue Streams | Advertising: The website makes money from broker, agent and bank ads. | Advertising: The realtor pays monthly fees to Realtor.com to get his/her name to show up on top 10% of the time in a rotation. | Advertising: Yahoo real estate sells display advertising on the website to new home builders, real estate agents and brokers. Yahoo has advertising partnership with Zillow; all showcase ads and featured listings ads purchased through Zillow will automatically appear on both Zillow and Yahoo Real Estate. |



| | Zillow.com | Realtor.com | Realestate.yahoo.com Yahoo.com |
|-------------------|---|--|-----------------------------------|
| | | Brokerage: The revenue of this website relies on the percentage of the transaction commission for generating leads. | |
| Cost structure | Platform development & management | Platform development & management | Platform development & management |

The newness dimension of the value proposition component is widely used by the sites. Zillow.com has a new and interesting property estimate algorithm called Zestimate which provides Zillow users with home value estimates that are calculated on a range of publicly available information, including sales of comparable houses in a neighborhood. The new feature for Realtor.com is DocuSign, allowing National Association of Realtors (NAR) members to sign documents anytime, anywhere on any device using the DocuSign for Realtors for free with unlimited signers and unlimited file storage. The NAR launched the Realtor.com International web site, which makes available to buyers across the globe millions of for-sale property listings on Realtor.com. Third party content providers feed residential property data to sites. For Realestate.yahoo.com, the new feature is the capability to display the users' location on the website. Regarding usability and performance dimension of the value proposition, the mobile device application in Zillow.com is helpful and user friendly. The elegance of the graphical user interface is helpful, and provides data and information quickly and efficiently. Search result pages have average sales prices in each city and provide a list of buyer agents and a button to call them directly. Realtor.com continues to improve lead capture, increase exposure for company and listings, and improve the overall web site experience for real estate buyers and sellers. Realestate.yahoo.com offers an easy home search service and useful tools that provide easy access to millions of property listings, a mortgage calculator, and market snapshot information. Regarding the customization dimension of the value proposition, internet sites offer a bundle of services to users that are provided by third-party providers. This shows that internet sites may use virtual value-chain business models.

Realtor.com has a mobile application that has different usage modes. The Realtor.com iPad app allows consumers to communicate with company realtors via the internet. Realestate.yahoo.com does not have a mobile device application. Regarding the website design dimension of the value proposition, the Mobile Widget of Realtor.com is slated to be removed. The Real Estate News and Advice will be temporarily removed and the number of searchable neighborhoods on Realtor.com will increase significantly. In comparison, Zillow.com and Realestate.yahoo.com have elegant designs compared to Realtor.com. The target customer component is identical for all the sites and includes buyers, sellers, house owners, brokers, agents, and banks. Regarding the distribution channel component, websites enable communication with customers to deliver value propositions, such as sales, and online advertisements. Regarding the advertising dimension of



the revenue stream component, some websites use the web-advertising model to make money from agents, brokers and mortgage bank ads. Agents and brokers buy local advertisements and they pay to display property listings and contact information such as agent name, property address, and property price. The three sites use a web-advertising strategy. Zillow.com generates revenue by selling advertising and which enables Zillow to offer free service to users. The revenue is used to build new internet services. Zillow also enables brokers and agents to purchase featured listings that appear by default at the top of a customer's property search results. It allows agents and brokers to purchase showcase ads in desired ZIP codes. Zillow's current mobile platform provides opportunities to deliver value to advertisers through its location-based advertising options. Realtor.com, affiliated with the National Association of Realtors, enables agents to buy advertising on the spot. Agents have various options to market featured homes to affluent clients or to advertise their services in banner ads based on locality. Pricing for realtors who choose to enhance their property and personal advertising is based on the advertising industry standard, the cost per thousand consumers reached by the advertisement. Advertising on the site is subject to tight controls, including ads from other realtors. Regarding the paid subscription dimension of the revenue stream component, the partnership between Realestate.yahoo.com and Zillow.com creates the largest real estate network on the internet, enabling real estate agents to advertise locally on Yahoo. Homebuyers have access to more local listings on Yahoo Real Estate, along with more photographs. Zillow serves as the exclusive provider of for-sale property listings information on Yahoo Real Estate. Yahoo will continue to control the appearance of for-sale listings and maintain separate databases for foreclosures, newly constructed homes, and rentals. It's not the first time Realestate.yahoo.com has partnered with other companies to provide for-sale property listings content. Yahoo and Prudential Real Estate entered into an exclusive agreement in 2004 for Prudential to provide for-sale listings information, but that arrangement ended in 2008.

CONCLUSION

For companies to change, improve, and innovate e-business models, they must understand them. To aid this understanding, we analyzed the top three e-business models of Zillow.com, Realtor.com, and Realestate.yahoo.com. The analysis includes the value proposition, target customer, distribution channels, and revenue stream e-business components. Canvas Framework consists of nine components but we focused on four due to the paper restrictions. The e-business models of the three companies exhibit similarities, differences, and common features. Similarities include online searches of real property, ability to contact agents and list real property, ability to target sellers, buyers, and agents, ability to advertise, enable personal and automated services, and establish relationships with business partners. The target customer is similar across the three companies and distribution channels are identical. Companies add new features and services to attract customers by differentiating themselves from competitors. Differences exist with regard to the newness feature of the value proposition. Zillow's new service, the ability to perform online property appraisal, increases efficiency, provides convenience, and increases the value proposition of customers. Traditional property appraisal is time consuming and inconvenient as customers have to identify appraisers, schedule appraisal appointments, and be available for the appraisal. This delays the buying and selling of properties and reduces product turnover and revenue. Real estate transactions require in-person signatures



so Realtor enables electronic signatures, a value added service for customers. Estimating property values requires agents who compare the target property to similar properties in the neighborhood. More revenue streams leads to increased revenues so companies with single income streams benefit from acquiring new streams of income. We found that e-business model differentiation plays an important role in the success of companies. Various distribution channels are used to reach customers. The resources used to reach, create and deliver value to customers are a combination of products, services and technologies including mobile applications. A major factor in creating value for customers is through the convenient access to information and services related to real estate. This includes access to agents, property information, location data, access to financiers, and mortgage analysis. Companies that combine the advertising and the value-chain model rank higher (Top 20 real estate websites, 2012).

Studies indicate that Realestate.vahoo.com, Realtor.com, and Zillow battle for the leadership position in the industry (Inman news, 2012; Property Portal Watch, 2011). In 2011, Realestate.yahoo was rated number one in market share while Realtor was number two, but in June 2012, Zillow was number one. All three sites have no paid subscriptions, do not rely on brokers and agents, and do not use brokerage except for Realtor. This suggests that the absence of paid subscriptions, brokers, agents, and brokerage do not significantly affect company performance, since the top contender in 2011 and 2012 had none. Based on our study, a successful e-business model does not have to include them all. The top three performing sites Realestate.vahoo.com, Realtor.com, and Zillow.com use the web-advertising model, which is the most successful model with respect to market share and revenue. In addition to using the webadvertising model, Realtor.com uses the brokerage model. Given that Zillow and Realestate.yahoo do not use the brokerage model suggests that it does not lead to competitive advantage. The three companies use the virtual value-chain, as many products and services are digitized and available online. The use of the internet implies the use of the value-chain model. None of the three sites uses the diversified business model. The three sites use hybrid internet models. The Realtor.com e-business model uses web-advertising, brokerage, and virtual valuechain while Zillow and Yahoo use web-advertising and the virtual value-chain.

The adoption and the development of e-business models do matter with respect to the various types of enterprises such as public agencies, for-profit private or public firms, and SMEs. Real estate companies are considered for-profit firms that are privately or publicly owned and would be classified as small, medium enterprises (SMEs). Public agencies differ significantly from private or public firms in their mission and objectives. Public agencies focus primarily on the social good and are seldom motivated by profit. However, for-profit firms are motivated by profit since they have an obligation to create shareholder wealth. Therefore, the type of e-business model companies develop or adopt should be congruent with the company mission and objectives. Our study indicates that the web-advertising model is appropriate for generating revenue and companies that are motivated by maximizing revenue and profit prefer it. It should not matter if the company is a for-profit private or public firm or a SME but it does matter if it is a public agencies and information, to improve the social good of communities. Public agencies would consider the virtual value-chain or the diversified model appropriate choices.



and mortar by providing services and information to a much larger audience. The diversified model is ideal for public agencies that seek to leverage the synergies that exist among various product and service offerings. Therefore, Federal, local and not-for-profit agencies may find the diversified model useful. In some situations, it may be viable to develop or adopt a hybrid e-business model that combines the virtual value-chain and the diversified model. This decision will depend on the mission and objectives that companies seek to fulfill. If they seek to exploit the natural synergies that exist among various products and services while targeting a larger audience, then we recommend a hybrid model.

This study is valuable because it identifies some of the primary components of e-business models, which help competitors assess the similarities and differences between e-business model components. The assessment elucidates the strengths and weaknesses of e-business models, which help companies to improve performance and customer experience. E-business models help in the execution of business strategy and are extensions of the traditional business, so this information is useful to alignment the e-business models, companies are equipped to focus on specific components. Since the real estate industry is experiencing hardship, knowledge and insight gained from this work help companies improve their competitiveness.

This research has several limitations. First, the page restriction forced us to ignore five ebusiness components. We also ignored some dimensions of the four components we discussed. For example, we ignored the information brokerage dimension of the revenue stream component and several dimensions of the value proposition, so a larger study should include them. It would be interesting to see how their inclusion changes the findings. Canvas Framework does not emphasize model management, continuous improvement, or business model governance, so we recommend expanding the study to include them. We recommend expanding the number of ebusiness websites to further investigate new findings.



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