



A Conceptual Framework for Considering Web-Based Business Models and Potential Revenue Streams

Donna L. Hoffman and Thomas P. Novak^{*}

Vanderbilt University

Abstract. The Internet's distinctiveness holds important implications for digital commerce efforts. Some marketing activities are proving to be difficult to implement in their present forms and need to be restructured so they are more compatible with the unique features of the Web. Thus, online managers now find themselves having to think about how to develop truly interactive customer environments, how to enable innovative content, and how to construct new methods for the measurement of customer behavior on the Internet. Firms need to experiment in order to exploit the full potential of the Internet, but experimentation may be too risky in an increasingly bottom-line oriented environment. This lecture introduces the key idea of "business model integration" as a framework for this experimentation. The lecture emphasizes how online managers can directly apply these new ideas to evaluate current and potential opportunities that can maximize the potential of their evolving digital commerce strategies.

Keywords: digital commerce, internet strategy, online customer value.

1. Introduction

In the wake of the dot-com collapse, many are now asking what it takes to be a success online and what makes for a profitable Web business. Understanding the issues involved in achieving profitability on the Web is turning out to be elusive, even as the Internet becomes an increasingly potent economic force both domestically and globally.

In this lecture, we introduce a descriptive framework for understanding the creation of successful Web-based business models that takes advantage of the distinctive features of the Internet in unique and sustainable ways. We discuss how managers can analyze different business models that combine the value proposition for *both* customers and the firm and show how our business model integration framework is a powerful organizing method not only to understand where the firm is at the present time, but also to help develop strategies for the

* The authors thank the Co-Editor and two reviewers for their helpful comments and suggestions. A comprehensive set of PowerPoint lecture slides with numerous graphics illustrating the examples, along with detailed notes to support this lecture article are available to academics by request from the first author (donna.hoffman@vanderbilt.edu).

future. These and other ideas are designed to help firms, dot-com and multi-channel alike, evaluate their evolving digital commerce business strategies.

2. Overview

What does it take to be a success on the Internet? What makes for a profitable Web site? Understanding the issues involved in achieving profitability on the Web is turning out to be elusive, even as the Internet Economy is becoming a more potent force both domestically and globally. While overall growth cannot be disputed, what does this mean for individual firms? Can we summarize what it takes to succeed in the online channel?

There are a variety of metrics firms use to gauge the success of their Web sites- margins, market cap, price:sales multiples, revenue growth, stock returns - but different measures give different results and these results can vary at different points in time. It turns out that it's hard to say who's successful and who's not, because there are many ways to look at the issue, but no obvious way to get a clear story. It seems confusing and the results are not completely consistent.

So, we realized that we had to go beyond what people have done so far and take a deeper look. We needed a framework. We've developed a way to think about things that is different from how people have been talking about business models so far.

One problem is that the Web possesses unique characteristics that distinguish it in important ways from traditional commercial media and physical markets. Because the Web presents a fundamentally different environment for consumers and marketers, relying on old paradigms may limit the manager's ability to effectively capitalize on the power of the Web channel.

Based on over a decade of scholarly research on the Internet opportunity that we have been conducting at eLab and the Vanderbilt University Sloan Center for Internet Retailing, along with our applied work with over two dozen companies, we have developed a descriptive framework for Web-based business models that takes advantage of the distinctive features of the Internet in unique and sustainable ways. Our framework is relevant to all firms that have a Web-based business component, not just so-called "pure plays".

No one needs to be convinced that e-commerce is big and getting bigger, but at the beginning of the lecture, the instructor may wish to first note key trends that help set the stage. Because background facts and figures change so fast, we have not included them here, but note that eMarketer (<http://www.emarketer.com/>), CyberAtlas (<http://www.cyberatlas.com/>), and Nua (<http://www.nua.ie/surveys/>) are good starting sources. Additional good data on top-line trends may be located from Forrester and Jupiter.

Below we offer an outline of one approach the instructor might wish to use to organize a ninety-minute lecture, along with some suggestions on how much time to spend on each section.

- I. *Current numbers and trends. (5-10 minutes)*
- II. *Unique characteristics of the Internet. (10 minutes)* After a brief discussion of current numbers and trends, we launch into the lecture. We first analyze the unique characteristics of the Web that define the digital commerce setting. These characteristics provide powerful consequences for customers and firms.
- III. *Customer and firm value (30-35 minutes).* We then review the generation of customer and firm value. It answers the question: Given the unique characteristics of the Web, how are companies doing business online generating revenues? Each revenue value proposition is backed up by examples that may be investigated further in class discussion or through mini-cases or group assignments. Some of the examples are well known, but many are not.
- IV. *Business Model Integration (20-25 minutes).* We then turn to a discussion of what we call business model integration and develop a key idea – that success online comes from a combination of two factors – value to the customer, and value to the firm. After identification of the two classes of value propositions generated by the Web, we discuss how to analyze different business models that combine the value proposition for customers and for the firm. The business model integration framework is a powerful organizing method both to describe and understand where the firm is at the present time, but also as firms consider strategies for the future. In addition, it can be used for auxiliary purposes, such as categorization and assessment of vendor offerings as well as development of recurrent optimization of different digital commerce investment paths (although there is typically not time to cover the latter in detail in the course of a single lecture).
- V. *Applying the Value Proposition Matrix (10-15 minutes).* Finally, we show how the firm can understand its strategic options and implement our framework. We present the Value Proposition Matrix as the key tool. The value proposition matrix is used first to locate the current offerings of the firm then make rational decisions

about what customer value-propositions to offer into the market place, and what technologies are best utilized in order to deploy them. This is designed as a tool to help the firm evaluate what options are available as their Internet strategy evolves.

VI. *Lessons Learned (5 minutes)*. We conclude with a summary of the key take-aways of our approach.

3. How the Web Generates Value

To develop a few case examples of how the Web provides a completely different experience, and new opportunities for generating value we start with a few questions. The question is: “what can we do on the Web that we really couldn’t do before?” or “Can we do this without the Web?” This may be a matter of degree, rather than absolute. This is one way to probe the idea of what’s new here.

Many of these are a matter of degree, some of these may have been done before, but the Web allows them to be done on a much greater scale.

There are many current online ventures that were simply not practical before the Web. The most exciting opportunities with the potential for huge payoffs involve developing brand new forms of business that enable things that were impossible or inconceivable before. For example,

- *Auctions* that let geographically remote participants bid on items and participate in communities based on affinity for categories (think eBay!),
- *digital downloads* – music, books, other types of information,
- *instant chat* – ability to communicate in real time with buddies,
- *Peer-to-peer* programs [early examples include Napster and Gnutella, now being extended to other types of information technology applications],
- *Web cams* for personal broadcasting, and so on.

Such technologies and applications expand the market for goods and services, for example, buying goods online from far away. Opportunities arise because companies can offer consumers control, choice, and value that may not have been previously available. These new business strategies take

advantage of the Internet as a many-to-many interactive medium that emphasizes communication and community.

The most interesting approaches to study are the extreme cases. These are the approaches causing the most “pain”, wreaking havoc with traditional ways of doing things, disrupting traditional distribution channels, creating new channels: eBay, Napster, AOL’s buddy lists, online auto sales, and online liquor sales are all examples of this.

The phenomenal growth of the Web is remarkable when you consider that it did not exist in any meaningful way for most consumers as recently as 1995! This indicates that the Web is arguably very different from previous business opportunities (Hoffman and Novak 1996).

There are several unique characteristics of the Web as a medium that make it sufficiently different from conventional media that current marketing paradigms and research approaches may not directly apply to some business problems. For example:

- The *many-to-many communication model* reverses the traditional one-to-many broadcasting paradigm. Any user can be an information provider.
- Consumers *interact with both people and computers*. Human interaction is not just with other people, but also with intelligent agents.
- *Consumer competence* - issues of access and skill – is an important consideration. For example, in the late 90s, Hallmark was forced to train its business customers to use its B:B site, it was so poorly designed.
- The Web allows unprecedented level of *choice* in an environment that approaches *full information*. How do customers make decisions in this environment?
- *Control* - balance of power shifts toward the consumer, bring in issues of online privacy and security.

3.1. Attributes

A variety of concrete attributes, what we call fundamental characteristics, define the Web as a medium (see Exhibit 1 below). Some of these attributes are based in the open nature of the Web, where any user can be a provider, at any time. Others derive from the nature of the information – which is

hypermedia and digital. Still other attributes deal with the nature of communication and interactivity that is possible, while others deal with the nature of content and the way customer use of this content can be identified and tracked. Obviously, these characteristics can represent opportunities or threats, and may be viewed as positive or negative, depending on the particular situation a firm faces.

Exhibit 1: Fundamental Characteristics of the Web

- Decentralized, distributed network of computers – “network of networks”.
- Open structure – information can be accessed by any user.
- Any user can be a provider.
- Medium can be accessed anytime, anywhere.
- Digital information.
- Nonlinear presentation and access.
- Action is required of user.
- Many-to-many communication model.
- Asynchronous or synchronous communication.
- Machine-interactivity required.
- Person-interactivity is mediated.
- No limits on how much content there can be.
- Information immediately accessible
- Content can be easily modified.
- Communications are persistent and enduring over time.
- Addressable.
- Logging of all behavioral responses.
- Behavioral responses are not necessarily linked to identity.
- Extendable to interface with external sources originally outside the Web.

Although these fundamental characteristics and basic elements/properties define the Web as a computer-mediated environment, other attributes are higher-order attributes that follow directly from combinations of the fundamental characteristics. These attributes are displayed in Exhibit 2.

These attributes characterize the Web – the extent that they make the Web different or distinguish it from other media is largely a matter of degree. Taken together, these fundamental characteristics and higher-order attributes create opportunities as well as potential problems for managers and their customers in online environments.

Exhibit 2: Higher-Order Attributes

- Range of content is anything that can be digitized (audio, video, text, etc.).
- Lack of physical constraints on content.
- Information is more easily accessed and readily available.
- Web is constantly changing.
- Digital copies are essentially free.
- Unbundled form from information.
- Environment approaches full information
- Erases geographic distance between buyer and seller.
- Source of information is often unknown.
- Greater scalability compared to the physical world.
- Medium can be used for multiple and diverse communication purposes.
- Software agents can be developed to process content.
- Virtual communities form naturally as customers self-segment.
- Word-of-mouth role is magnified.

3.2. Customer Consequences

Directly as a result of the attributes, there are a series of consequences of the Web for customers (see Exhibit 3). These apply in both B-C and B-B situations. Some of the most important customer consequences center around the degree to which the Web enhances the way a customer can search for information and make decisions. Obviously, there are both positive and negative aspects to this. The Web also expands customer possibilities, facilitating trial, and creating greater availability. The balance of power between firm and customer shifts, with the customer achieving greater control. The Web, much more so than traditional media environments, allows customers to alternate between experiential (non-directed, “fun”) behavior and goal-directed (“work”) behavior (Novak, Hoffman, and Young 2000). Online

commerce must take account of both.

Exhibit 3: Customer Consequences

- Information overload.
- Can be hard to find information.
- Customer information has value.
- Facilitates trial.
- Greater availability of hard to find products.
- Lower prices (free at the limit)
- Anonymity is possible.
- Customer has more control.
- Customer has more power.
- Convenient
- Can be entertaining.
- Novelty (“because you can”)
- Customer may seamlessly alternate between experiential and goal-directed behavior.
- Customer must have competence to use Web.

3.3. Firm Consequences

These attributes of the Web and the new forms of power that they give to the customer have significant consequences for the firm. From the firm’s perspective, many new ways of conducting business are possible on the Web. There are economies and efficiencies of scale, of production, of distribution and of reaching customers (see Exhibit 4). It is now possible for a firm to know much more about its customers than ever before. As distance shrinks, new markets and new competitors open up. Customer word-of-mouth, due to the balance of power shift, can become a trickier issue online. The role of brand name becomes even more important on line, as trust issues take center stage. For many firms, however, the greatest consequence of the Web for their business is that Internet business models are seen as a challenge (Porter 2001).

Exhibit 4: Firm Consequences

- Can send cheaper and more information to customers
- Interaction with customers facilitates one-to-one and relationship marketing.
- Greater information about customers. This facilitates customization, especially for information rich products.
- Can identify the origin of new customers (convert previously anonymous events into identified transactions).
- Can determine response to advertising exposure.
- Can customize/tailor communication to specific customers.
- Can quickly obtain a global presence.
- Can reach new markets.
- Sellers dependent on geography or customer ignorance to insulate themselves from low cost sellers are threatened.
- Because WOM is magnified online, you have to get it right the first time.
- Operational efficiencies to moving businesses online (transfer more of selling function to the customer).
- Channel efficiencies (electronic offerings can be created immediately).
- Reduction in marginal costs of producing and distributing information goods.
- Economies of scale for digital goods distributed online.
- Can develop a brand name much faster than it takes traditional firms.
- Brand becomes more valuable online.
- Customers can be integrated into the product development effort.
- Significant first-mover advantages (winner-take-all).
- Legal and policy consequences (privacy) become very important.
- New forms of intermediation.
- Business models are a challenge.
- Difficult to charge for content.
- Enables new marketing strategies (e.g. affiliate programs).

What are the implications of the above for business models? In our experience, business models on the Web are remarkably undefined. Some consider “business-to-business” a business model; others consider

“advertising” a business model, while others consider being a content provider a business model. However, a firm could be a business-to-business content provider generating revenue from advertising, among other sources. From this description, it is not immediately clear what the business model is. Early classifications of Web sites (e.g. Hoffman, Novak, and Chatterjee, 1995) as well as current categorizations (Rappa, 2003), provide typologies of Web businesses, but don’t shed much insight into the nature of the underlying business model.

So, where is the business model in all of this? It turns out not to be as useful to categorize businesses in terms of types (e.g. exchanges, hubs, portals, and so on) or revenue models (e.g. advertising, subscription, commissions on transactions facilitated) as it is to understand revenue generation opportunities in the context of the value being provided to the customer.

In our view, business models are defined by specific combinations of 1) customer value models, 2) revenue models, and 3) customer segmentation models. The customer consequences shown in Exhibit 3 underlie the *Customer Value Models*, and the firm consequences underlie *Revenue Models*. Both are described in detail in the next section. The approach taken by Amit and Zott (2001) bears some similarity to ours in that they also define business models in to context of value creation. However, they focus upon transactions (identifying content, structure, and value components of transactions), while we adopt a broader perspective that is not centered on transactions, but rather on customers.

4. Generating Customer Value and Firm Value

Providing value to your customers is the essence of a customer-focused approach – without it, you can not do business. The question is: “What customer benefits do you provide that create value for your customers?”

There are a large variety of ways to provide customer value, and not all of them will make sense in every situation. For example, provisioning these services also should provide a matching revenue stream for the organization. We recommend that firms brainstorm on each of these value propositions within the context of their own businesses to determine the potential applicability.

It is important to note that by themselves, the customer value models do not imply a specific revenue model. Some revenue models – like transaction fees or profit margins – of course make more sense for certain customer value models. But, in our framework, it makes most sense to consider sources of customer value separately from sources of firm revenue.

Brokerage models are “market-makers” that bring buyers and sellers together and that facilitate transactions. While primary thought of as B:B, they

can also be B:C or C:C. A natural revenue stream for this model is collection of a transaction fee, but other revenue sources such as advertising, subscription or sponsorship are possible. The categories we discuss below do not represent an exhaustive classification, but they are comprehensive and provide a good framework for our discussion. The categories are: Brokerage (buy/sell fulfillment, market exchange, vertical, buyer aggregator, distributor, virtual mall, metamediary, auction broker, reverse auction, classifieds), Content (generalized portal, personalized portal, specialized portal, magazine), Search (search agent, directory, pricebot), Incentive (free model, attention marketing), Freeware, Communication, Control, Outsourcing, Entertainment (gaming, engagement marketing), Transaction (virtual merchant, catalog merchant, bargain discounter, direct sales, etc.), Affiliate, and Community (voluntary contributor model, knowledge networks).

4.1. Brokerage

Examples (Web address appears in parentheses after the company name):

1. **VerticalNet** (verticalnet.com) owns and operates dozens of vertical marketplaces that unite buyers and sellers from around the world by catering to individuals with similar professional interests (energy, healthcare, food service, etc.)
2. **Pulp and Paper Online** (pulpandpaperonline.com) is an online marketplace for the pulp and paper industry that attempts to create a more efficient marketplace for marketing and procurement methods for buyers and sellers in that industry.
3. **Elemica** (elemica.com) is a global e-marketplace for the buying, selling and supply chain management of chemicals. It offers an integrated, end-to-end system that enables buyers and sellers to streamline their business processes for contract sales-improving negotiation, contract management, order fulfillment, and payment.

4.2. Content

Providing useful content is a second customer value model. The value derives from the extent to which the content meets customer information needs. News sites, online magazines, product information and review sites, and so on, are all fairly obvious examples of content sites. Two innovative examples that stretch the definition of content sites are listed below.

Examples:

1. **About.com** (about.com) is an outstanding – and early – example of a content site. About.com relies on specialized human “guides” to organize and maintain a vast array of information areas. At the end of 2003, the About network consisted of hundreds of sites organized in 23 “channels” encompassing over 50,000 subjects. The network links to over 1 million Internet addresses and contains a large archive of original content.
2. **The Internet Archive** (archive.org) is an ambitious project to build a digital library of “snapshots” of all Internet sites, beginning in 1996. The Archive contains over 300 terabytes of information, with 12 terabytes added each month. Using the Internet Archive’s WayBack Machine, one can, for example, view Apple Computer’s Web site as it appeared on October 23, 1996, April 27, 1999, or on hundreds of other dates between 1996 and the present.

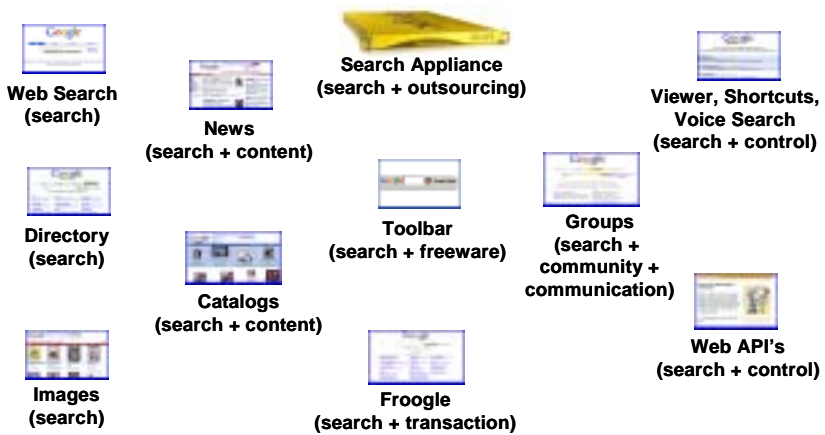
4.3. Search

Searching for information is one of the most important services a firm can provide to online consumers. The early portals like Yahoo established a strong foothold by helping people locate information on the Internet. The search category also includes recommender systems [since this also helps customers locate products or information that otherwise they would not be able to find].

Examples:

1. **Google** (google.com) A prime source of customer value is customer search. This provider alone claims to index over three billion Web pages! Google is one of the few remaining examples of a pure search engine – most have evolved into portals. Its revenue model continues to evolve, but currently is largely based on advertising. The diagram at right shows the different ways that Google captures and delivers search value to its customers. Note that in more recent Google applications (i.e. Google Catalogs, Froogle), search value is combined with additional sources of customer value, a strategy we describe in more detail later in the section on “Business Model Integration”.

Google Customer Value



- Active Buyers Guide** (activebuyersguide.com) helps customers search for products that meet their needs in over 100 product categories. It uses a proprietary decision engine to present product features to customers and perform on-the-fly preference analysis to predict ideal products. Its revenue model is based on selling customer data. This is possible since the company aggregates the constant flow of data from the individual preference profiles into a real-time corporate market research service. Manufacturers' subscriptions to the company's research reports can vary based on the industry being covered, but annual rates in some categories can range up to \$50,000 a year, according to company sources. Active Research provides the recommendation service to each of its partners on an outsourced basis, allowing each site to promote the buying guides under its own brand names. Active Research keeps a tally on all shopping guides filled out by consumers. The company acts as an "infomediary", brokering the information that flows between consumers and manufacturers.
- RoboShopper** (roboshopper.com) adopts a simpler approach, providing a single interface that allows shoppers to easily compare products across multiple storefronts without leaving the

RoboShopper environment. Its revenue model is based on collecting revenues through a combination of advertising and commissions on sales linked through the shopping bot.

4.4. Incentive

There are a variety of incentive schemes on the Internet. These give customers the option of accumulating “points” or other incentives that can be useful later. By rationing out the “points”, it is possible to mold customer behavior. For example, it is possible to provide referrals to other companies that also accept the “points.” In many respects, these incentives act like an unofficial currency in that they have a specific value attached to them. Incentive value models experienced considerable shake out at the turn of the millennium with the demise of high profile dot.coms like Beenz, Flooz, and Cybergold, and make for interesting class discussion.

Examples:

1. **Greenpoints** (greenpoints.com) From S&H, the company that brought you Dinah Shore and Green Stamps. The S&H Green Stamps program, which established in 1896, now has an online loyalty program that includes arrangements with a wide range of service partners and an S&H credit card.
2. **MyPoints** (mypoints.com). This is a multichannel marketing program that allows consumers to earn points which can be redeemed for products. Points can be earned for reading and responding to email solicitations, taking surveys, purchasing products from MyPoints partners, or dining in restaurants.

4.5. Freeware/Low Cost Tools

Similar to incentive value models is the freeware value model – where customers get “something for nothing”. The strategy is that after the customer gets a free good, there are presumably abundant opportunities for subsequent revenue streams. Customers can take advantage of many free goods this way. A rich discussion can surround the viability of such models, based on the idea that once high traffic volume is established, there will be some way to “monetize” the traffic.

Examples:

1. **BlueMountain** (bluemountain.com) is one of the best known sites on the Internet, offering a selection of free online greeting cards as well as an expanded assortment of eCards for members for an annual subscription of \$13.95 after a free month. Higher priced membership tiers allow the member to also create and print cards. Excite bought BlueMountain for \$780 million in cash and stock in 1999 and sold it to American Greetings in 2001 for \$35 million.
2. **Fastmail** (fastmail.fm) is one of a wide range of free email services (others include Yahoo! Mail, MSN Hotmail, and Mail.com). Fastmail offers both free advertiser-supported email accounts, as well as a variety of low-cost advertising-free email services.

4.6. Communication

Communication is an important source of customer value. Communication – originally email – is the major reason people go onto the Internet in the first place. Some companies have taken advantage of this need and moved into the space with products.

Examples:

1. **Net2phone** (net2phone.com). This Internet-based “communication without borders” product allows low-cost computer-to-phone phone calls within the US using a headset plugged into one’s PC, and low-priced international calls from PC to phone. Its revenue model is based on pay-per-call; licenses technology to investor AT&T.
2. **Conversive** (conversive.com) offers artificial intelligence Web based *AnswerAgents* and telephone/wireless based *AnywhereAgents* to provide realistic customer service communications with customers in real time. AnswerAgent technology (originally termed “Verbots”, or verbal robots), accept user in put in typed text, and respond in spoken English via an emotionally animated avatar.

4.7. Control

The Web inherently increases customer control. It also creates problems involving customer privacy, objectionable content, and proprietary content, for which increased control is a source of customer value.

Examples:

1. **Anonymizer** (anonymizer.com) uses a subscription revenue model to allow a user to disguise their Web visits and identity. There is also a free version.
2. **Cybersitter** (cybersitter.com) and **N2H2** (n2h2.com) are commercial products which restrict objectionable incoming content.

4.8. Outsourcing

A further source of value is outsourcing. In this model, the online firm provides a variety of services through the Internet. Home office applications using the ASP model, for example, can be provided for enterprise systems. The .NET program of Microsoft, including its recent purchase of Great Plains software, a provider of Internet-based ERP applications, indicates a strong trend in this direction. Other types of outsourcing arrangements use a Web-delivery mechanism for customer configuration of goods and services.

Examples:

1. The **iPrint** (iprint.com) is a Web-based commercial printing service oriented to consumers and small businesses. Customized products can be ordered in low quantities; for example a minimum of 10 pads of customizable Post-it® Notes, and the minimum number of postcards is only 250.
2. **Amazon Web Services** (www.amazon.com/gp/aws/landing.html) expands the definition of outsourcing. Web services provides a set of tools that Web developers, Amazon affiliates, and other sellers and vendors can use to build custom applications and interfaces that draw upon Amazon's product content and site features. The **Amazon Browser** (<http://www.pmbrowser.info/amazon.html>) is one such application that provides a visual "perceptual map" point-

and-click interface for browsing Amazon's collection of books, music, and DVDs.

4.9. Entertainment

Entertainment is a further source of customer value. Gaming sites (see, for example, gamesites200.com and www.ogaming.com) are obvious examples, but entertainment value can be very usefully applied in sites that additionally offer a very practical, goal-oriented component, such as the two examples listed below.

Examples:

1. **Mini** (miniusa.com), the 2003 Webby Business Awards (www.webbyawards.com) winner in the Automotive category, allows a consumer to design a custom virtual Mini and race it against an opponent through the streets of Brooklyn. The Webby Awards Judges statement noted the "infectious spirit" generated by the animations and games on the Mini site, but also mentioned that these experiential "elements don't get in the way of more goal-directed consumers".
2. **Tickle** (tickle.com, formerly known as eMode) offers a variety of free "fun tests" that allow visitors to answer questions like "what's your party style?", "what's your theme song?" or "what kind of kisser are you?" The entertainment value attracts visitors who are then subsequently exposed to the opportunity to build an in depth personality profile which is used as the basis for a paid matchmaking service.

4.10. Transaction

Transactions are an obvious value source for the customer, who receives value first from being able to make a transaction with companies that would normally not be accessible, and second from the special bundling that comes from "theme stores" [that can be thought of as special places that have assembled a special set of available transactions for the customer]. While the dot.com collapse brought about the downfall of many highly visible online retailers like Pets.com and Webvan (Shalit 2001) and led the way for the current dominance of large multi-channel retailers, specialty Internet retailers have increasingly found success as well.

Examples:

1. **Blue Nile** (bluenile.com) is a Seattle-based online jewelry store which has achieved significant success selling engagement and wedding rings, as well as other jewelry. Prices are significantly lower than traditional jewelry stores, and Blue Nile offers consumers a more relaxed alternative to the high-pressure sales tactics often found in the commission-based physical world
2. **Zappos** (zappos.com) has been profitable since December 2002 selling a single product category – shoes. Zappos offers a significantly wider selection than any physical world store could hope to offer. It has overcome consumer reluctance to ordering shoes, a product which typically requires trial before purchase, by offering not only free shipping, but also free return shipping in conjunction with a 365 day return policy. While Amazon is generally considered the online retailing exemplar, Zappos' Web-based system for returning and tracking the progress of product returns is ahead of Amazon's capability from the perspective of consumer ease of use and functionality.

4.11. Affiliate

The affiliate model provides value to small Web sites that seek to be advertiser supported, yet lack the traffic clout to generate any advertiser interest (Hoffman and Novak, 2000). In the affiliate model, Web sites self select themselves to participate in “affiliate programs” of transaction sites such as amazon.com or ebay.com. The affiliates place links or ads on their sites, and are awarded a referral fee if a customer clicks on their link and purchases goods at the transaction site, registers for the site, or some other targeted behavior for which a commission is paid. This is a pay-per-performance revenue model – if an affiliate does not generate sales (or other targeted behaviors), there is no cost to the merchant.

Examples:

1. **Amazon** (amazon.com) – Amazon's Associates program has signed up over 900,000 Web sites which link to Amazon products and earn between 2.5 and 15% in referral fees for the sale of products made through these links.

2. **eBay** (ebay.com). Rather than pay a commission on sale of goods, eBay targets different types of consumer behavior in its affiliate program than Amazon. eBay affiliates earn a flat fee of \$5.00 for each “active registration” (a new eBay user who places a bid within 30 days of joining) they generate, plus a flat fee of \$0.05 for each qualified bid.
3. **Commission Junction** (cj.com). Commission Junction is a virtual marketplace and account management system that connects advertisers (firms with a product to sell) and publishers (Web sites promote the advertiser’s product, and which receive pay-per-performance fees from the advertiser). As of December 2003, there were 1250 advertisers who were Commission Junction clients – 1250 potential sources of affiliate payments for Commission Junction’s publisher clients.
4. **Art.com** (art.com) – Pays commissions ranging from 25% to 30% for sales referred by an affiliate’s Web site. The sale can take place up to 10 days after you refer a customer to Art.com. Additional commissions paid include a 5% commission on lifetime sales earned through “sub-affiliates” (new affiliate Web sites who you cause to sign up with Art.com).

4.12. Community

Community is another source of customer value. In this model, customers (or others) are able to take advantage of the connectivity of the Internet to find like-minded persons (Armstrong and Hagel 1996).

Example:

1. **Epinions** (epinions.com) collects and organizes consumer-written opinions about thousands of products, as well as the vendors that sell those products. While many sites, including Amazon, include such consumer reviews, Epinions pushes this concept one step further through mechanisms that ensure that quality reviews will be the most visible. In Epinions, reviews themselves are rated, and the best rated reviews are the ones that make it to the top of the list. In addition, Epinions also provides an incentive to authors for writing quality reviews, in that writers can earn Royalties from an Income Share program which allocates some of Epinions’ income to those authors whose reviews were determined as useful in

making a decision. Epinions' revenue model follows by directing review readers' traffic to partnering online vendors.

2. **There** (there.com) is a fascinating new development in the genre of social networking sites that include Classmates.com, Tribe Networks, Friendster, Match.com, and Tickle Network (formerly eMode). Extensively beta-tested for the past two years, There formally launched in November 2003. There is a visually rich, multiplayer 3D chat environment that brings an interesting twist to avatar-based "virtual worlds". A fundamental feature of There is an underlying token economy using virtual ThereBucks, which can be either purchased at a given exchange rate with US currency – or which can be earned or bartered for in the online environment itself. Virtual products can be purchased with ThereBucks, and There members can even download developer kits which allow them to produce, and sell, their own virtual products.

4.12. Revenue Models for the Firm

Revenue models specify how a firm translates customer value into a revenue stream. In effect, they specify where the money comes from. Clearly, the Web makes possible a variety of revenue models for a firm. These range from direct commissions on sales of goods and services, to other types of less direct models for collecting fees. We can expect that further types of revenue models will be available in the future as innovation continues in this sector (Rayport and Sviokla 1995). For example, access to customers and information about those customers can represent significant sources of revenue for some firms.

Exhibit 5: Revenue models for the firm

Transaction fees	The firm collects a fee for each transaction that is conducted through its e-Business infrastructure
Hosting fees	Collection of fees for hosting others' applications and transactions on its e-Business infrastructure. (ASP model)
Referral Fees	The e-Business site provides customers with information regarding products and services on other sites. When the customer goes there and conducts business, the referred to business pays a fee to the referring business.
Subscription fees	Regular payments for access to information or services provided into the marketplace.

License fees	Collection of fees for e-Business processes to which the company has rights. Amazon.com's "1-Click Ordering" system is such a system. It has been licensed to several companies.
Pay-per-view	Charge a fee for each access to information.
Pay-per-performance	Fee is collected if the consumer completes a transactions (but <i>only</i> if a transaction is completed).
Micropayment	Collection of very small transactions fees, but in high volumes.
Advertising	Allowing the firm's e-Business infrastructure to serve as an advertising platform for other companies.
Sponsorships	Receive fees for sponsoring others' e-Business sites through your own infrastructure.
Ransom Model	Provide some information free, and then charge for completion or further access to the information. Examples: Stephen King provides a chapter free, then charges if you wish to read the whole book or subsequent chapters.
Margin on sale of goods/services	Most common model. Selling goods and services through the Internet and collecting a margin on it.
Sale of customer data	Collection of customer data, then selling it to others. Note: This practice is illegal in Europe, but quite common in North America.
Offline customer response	The Web is used to entice customers, and then subsequent profitable transactions are done offline, through a brick-and-mortar infrastructure.
Efficiency & effectiveness gains	Transactions efficiencies are improved (less errors; higher rates for information; greater volumes at same cost)
Value-added services (Linux model)	Fees are collected on new services that are provided for "free" goods and services offered on the Internet.
Virtual real-estate	The company develops a presence in cyber-space, and then is able to leverage this "real estate" by selling it to, or renting it to others.

5. Business Model Integration

5.1. Types of Customer Segmentation Models

The most commonly used and accepted Web segmentation models are business-to-business (B:B) and business-to-consumer (B:C), but there are other models that can be identified as well. Examples are consumer-to-agent (C:A) and business-to-employee (B:E). Note: The “Agent” refers to artificial agents used by consumers for automated shopping and price comparisons (West, et. al. 1999).

Exhibit 6: Customer segmentation models

	B	C	A	E
Business	B:B	B:C	B:A	B:E
Consumer	C:B	C:C	C:A	C:E
Agent	A:B	A:C	A:A	A:E
Employee	E:B	E:C	E:A	E:E

It is possible to locate examples of customer-centric firms operating in most of these customer segments.

- **B:B** – VerticalNet owns and operates dozens of vertical marketplaces that bring together buyers and sellers from around the world by catering to individuals with similar professional interests (energy, healthcare, food service, etc.)
- **B:C** – Walmart.com, the online presence of the world’s largest retailer.

- **C:C** – Napster, the original killer C:C file sharing application. Friendster (Friendster.com) connects people through networks of friends for dating or making new friends.
- **C:B** – Priceline (Priceline.com) specializes in consumer to business reverse auctions in the travel and vacation industry.
- **C:A** – Shopping.com, the recent incarnation and expansion of DealTime following its acquisition of Epinions, offers consumers the ability to find, compare, and buy products that are sold in thousands of online stores.

5.2. Additional Methods of Segmentation

Although the B:B and B:C segmentation models are the most common, some firms may have in place other segmentation schemes that are either better suited to their particular marketplace, or that have such a historical weight in their firm that they can not be ignored. There is nothing in this approach that prevents the development of alternative segmentations. *Segmentation theory* is the approach used to define the most optimum segmentations for a market.

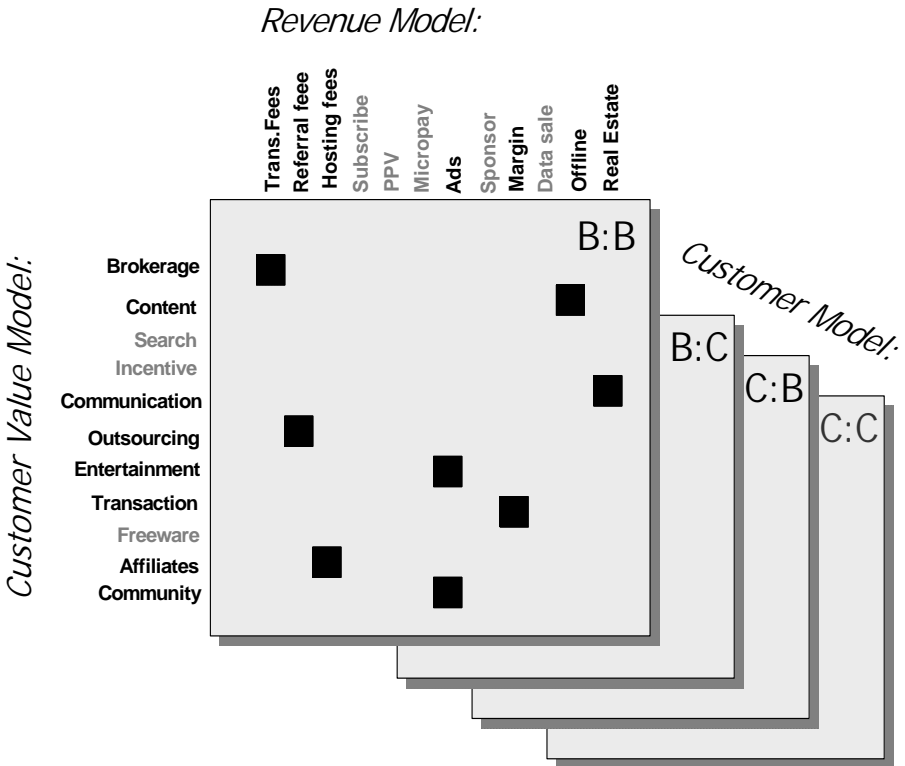
5.3. Integration of Models

As we stated earlier, business models are defined by specific combinations of 1) customer value models, 2) revenue models, and 3) customer segmentation models. Since each different type of customer segmentation model can support a variety of revenue and customer value models, it is possible to develop multiple streams within each of these models – we call this “business model integration”.

In Exhibit 7 below, each square represents a different customer segmentation model. For each customer segmentation model, we can have various combinations of customer value models and revenue models. Note: since our approach assumes that a transaction is *not* viable unless it also brings revenue to the firm, there is a large set of transactions that of necessity fall outside this criteria, and thus have no place on the matrix. The Exhibit shows a large number of possible combinations for the B:B space, although this same type of analysis can be done for *each* of the different customer segmentation models. Integration is a key factor to success and includes multiple customer value models, multiple revenue opportunities, along with built-in mechanisms for directing traffic to the site and keeping it coming back again and again.

Some of these combinations make more sense than others, and investigation may reveal that some of the transactions are “null sets” – such analysis needs to be done on a company-by-company basis. Firms need to be creative in combining value and revenue models in innovative ways.

Exhibit 7: Customer value, revenue and customer segmentation model integration



6. Implementation

Our framework is useful for helping the organization understand its current strengths and weaknesses, and for developing alternative scenarios that might be considered for further development of strategy.

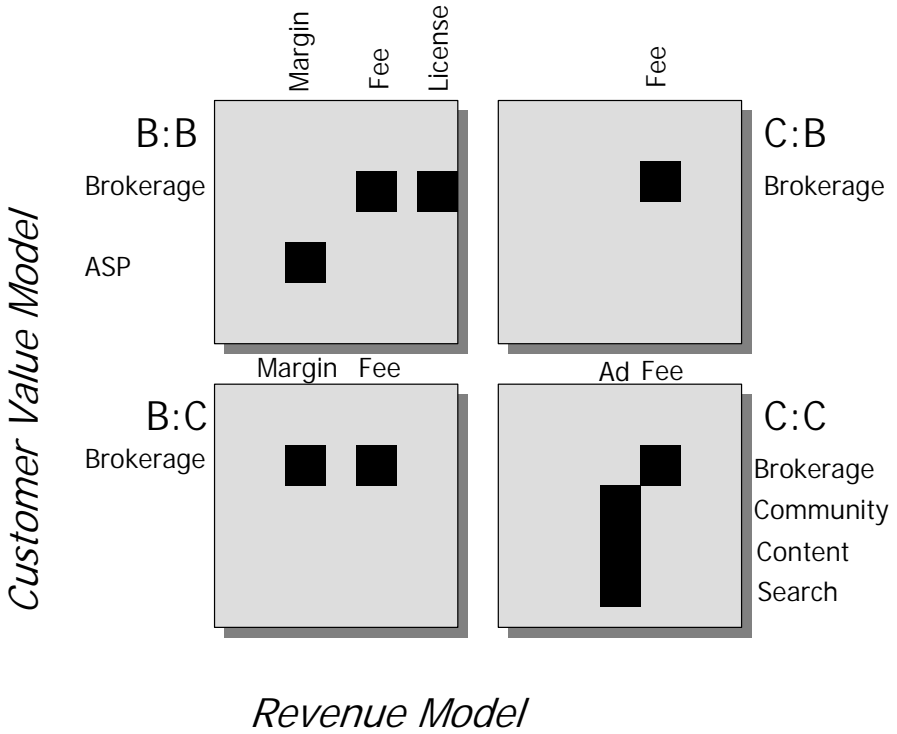
6.1. Strategy Formulation Example: eBay

The business model integration framework can be used to examine firm strategy. This is done through the following steps:

1. **Segmentation** – Agree upon the type of segmentation approach most appropriate to your market.
2. **Connect the firm with its customers** – Examine the current operations between the firm and its customers. What types of transactions and relationships are supported? For each, characterize the principal value proposition to the customers and the corresponding revenue value-add for the firm.
3. **Plot results** – Plot each customer-firm connection on the business model integration matrix.
4. **Identify expansion strategy** – Examine possible next steps that can be taken to expand the “business model footprint” of the firm. Any new service should satisfy the two value propositions, e.g. both customer and firm value and provide multiple revenue streams.
5. **Options analysis** – For each new option considered, draw up an estimate of the difficulty, cost, and possible implications for infrastructure.

For illustration purposes, a brief analysis is provided for eBay in Exhibit 8 below. Very interesting class discussion and student exercises may be developed using this approach.

Exhibit 8: Potential strategy path for eBay



1. eBay began in the C:C space, using the brokerage customer value model and collecting transaction fees in consumer to consumer auctions. Rapid user growth created community, content and search value streams, which in turn created the critical mass for substantial advertising revenue. This advertising revenue led to other opportunities including Half.com and co-branded deals with Disney and AOL to attract more traffic.
2. B:B followed. eBay offers the Small Business Exchange, in addition, there is nothing that would prevent eBay from licensing its technology in the B:B space, for industry-specific auctions.
3. eBay expanded into the B:C space, providing firms the option of auctioning merchandise directly to consumers using the eBay infrastructure. For example, the Disney/eBay site sells authenticated Disney memorabilia.

4. And finally, while this would be the greatest stretch for eBay, it could choose to move into the C:B space, allowing consumers to “name their own price” for merchandise and services.
5. An integrated business model will create greater value and revenue opportunities for eBay.

7. Lessons

The Web is a unique new commercial medium, and its distinctiveness holds important implications for digital commerce initiatives, whether the firm operates online exclusively or participates in multiple channels. Some marketing activities will be difficult to implement in their present forms and will need to be reconstructed into a paradigm more compatible with the distinctiveness inherent in the Web. Thus, managers now find themselves having to think about how to develop truly interactive customer environments, how to enable innovative content, and how to construct new models for the measurement of consumer behavior in new media.

Experiences strongly suggests that business models derived from multiple customer value models, revenue models, and customer segmentation models increase the profitability and likelihood of success in the digital arena.

There are no bad customer, value, or revenue models. But some *combinations* of customer, value, and revenue models make more sense than others. And some *implementations* of customer, value, and revenue models are better than others.

The very best business models will take advantage of the distinctive features of the Web in unique and sustainable ways and leverage these features to provide value that cannot be created as readily in the physical world.

Firms are finding the need to experiment to find those business models that allow them to exploit the full potential of the Internet. Business model integration gives a framework for this experimentation.

Finally, when firms fail with their Internet strategies, we believe it is because they have failed to give due consideration to the customer value component of the business model. That is, a revenue model and a customer segmentation model cannot operate in the absence of what benefits to offer that provide value.

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