

ShopBots, Price Comparison and Price Competition

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ABSTRACT

Two shopbots were used to determine high-to-low price disparity for identical models of 25 consumer durables, revealing substantial price disparity ratios. A survey of 1,135 American online shoppers revealed their dependence on shopbots and frequency of other online shopping actions. Typical respondent reported they "very often" used search sites to locate what they wanted. Nearly 30 percent used the most popular price comparison site, Yahoo! Shopping, in the past year, suggesting substantial potential for future price rationalization. Several customer relationship management tools online merchants might use to avoid the resulting direct price competition are discussed.

INTRODUCTION

There is general agreement among marketers that online shopping and buying will have profound effects on consumer goods markets. The main questions regarding *how*, *when* and *where* remain, as yet, unanswered. The ready ability to do product search and to compare product features and prices are certainly among the principal factors reshaping the landscape for consumer shopping and buying, both online and offline.

While virtually all consumer purchase decisions are based on the possession or acquisition of *information*, this is especially true for purchases of substantial value and importance to the buyer. Impulse purchases of small-ticket items and routine buying of frequently purchased goods ordinarily do not involve an appreciable amount of *information search*. But it is precisely that which distinguishes the *extensive problem solving* processes from their lesser cousins. Durable consumer goods, as well as services of substantial importance are the kinds of purchases that evoke more intensive search.

Information Search

Most substantial purchase decisions are not unitary; rather, they consist of subordinate choices. In a general sense, the choices can be classified into two, broad categories: *What* to buy and *where* to buy it. Online product search and comparison facilities are especially well suited to providing this kind of information, and to do so quickly and easily. By presenting comparison information on salient criteria (e.g. price) from multiple vendors of a specific product, online shopping aids can increase the number of alternatives considered, while reducing search time and costs.

Independent websites or so-called "shopping bots," as well as those proprietary to a particular vendor provide product information in both text and tabular form. Such sites allow the online shopper to compare product features and benefits, as well as prices, availability and transaction details. Based on Brynjolfsson's article, Shopbots are also defined as Internet-based services that provide 'one-click' access to price and product in-

formation from numerous competing retailers. In so doing, they reduce buyer search cost for product and price information by at least 30-fold compared to telephone-based shopping and even more compared to physically visiting the retailers. They have substantial value to shoppers addressing the question of *what* to buy.

Branding and Uniformity

Once a shopper has decided *what* to buy, there is nearly always a choice about *where* to buy it. Unique designs and custom-made goods may be available from only one vendor, but that is rarely the case for the great bulk of consumer durable purchases. Whether tires for the car or a new set of golf clubs, a lawn mower or a plasma television set, manufactured goods are branded and identified by specific model, virtually without exception. Uniformity among individual products of a particular make and model is nearly perfect.

Some research suggests that online medium does not have a main effect on price importance, but it increases the perceived value of undertaking a price search.

This implies that once a buyer has decided *what* to purchase, in terms of brand and model, there are only a few distinctions among online vendors of the goods. In many, and probably most cases, the main distinguishing factor is *price*. If this be the case, price comparison will determine, in large measure, where the shopper will buy. Under these conditions, vendors of such products are cast into *direct price competition*. These products and situations are the focus of this research.

Online Price Comparisons

Online search sites such as *Yahoo! Shopping* or *Google Product Search* and others allow shoppers to compare prices quickly and easily. Price comparisons need not necessarily be for identical goods, but if shopper specifies a specific product, brand, and model, then the search will reveal price differentials among vendors of *identical* goods. Some product search sites even take into consideration the inclusion sales tax, if any, and shipping costs to the destination zip code. Brynjolfsson et.al stated that consumers who search more intensively are less price sensitive than other consumers, reflecting their increases weight on retail differentiation in delivery and reliability. Typically the offerings can be sorted by price, high to low or from low to high, and constrained by price categories chosen by the online shopper.

While the item submitted for price comparison may be identical, the vendors are not likely to be so. If they were, the consumer who was aware of a price disparity would almost certainly choose the lowest price offering. Prices would be "rationalized," and price disparity would be minimized or eliminated. To the degree that shoppers select vendors whose prices are *not* the lowest, the choices might result from two basic factors: (1) The buyers are ignorant of the price disparity, or (2) they perceive sig-

ShopBots, Price Comparison and Price Competition

nificant differences among the vendors of the goods that make some preferable to others despite higher prices. This research will explore both of those factors.

Background

Although product search and price comparison sites are relatively new phenomena, these facilities are growing rapidly, commensurate with the growth in internet access and more general search engine use. With this growth, there is an evolving literature reporting on the effects of online price comparison. While some have substantial theoretical and conceptual relevance, few provide significant *practical* insights for online marketers.

Some previous studies are based on purchase of relatively inexpensive goods, such as books, detergents or paper towels. Certainly there are price considerations for such items, but for the most part they are not likely to warrant extensive online product search and price comparisons. It would appear that shoppers would regard such small price disparities as negligible, if not trivial. Research based on "small-ticket" purchases have inherent limits to the degree results can be generalized to more expensive goods. As a consequence, this study focuses on consumer durable goods of substantial value.

The Role of Ignorance

Economists have long assumed that price dispersion for "commodities" arises from ignorance of price differentials. Thus, if buyers become aware of price disparity (e.g., in a "perfect" market), they would buy only from vendors with the lowest prices while supplies lasted, prices would be "rationalized," and disparity would be eliminated. In such circumstances, price dispersion is attributable only to ignorance of the existence of lower prices. But commodity markets are a special case, where both the commodity *and the vendors* are identical. This is ordinarily not so for durable consumer goods.

Distinctions Among Vendors

While the consumer durable product for which the online shopper is searching may be identical from one seller to another, the vendors are virtually never so. Consumers' choice of online search strategy are affected significantly by buyers' attitude toward the price offered by their preferred online seller, their perception of online price dispersion, and their awareness of shopping agents. Usually there are differences, or at least *perceived* differences in vendor reputation, reliability, transaction and payment factors, delivery options, and the like. Sometimes major, sometimes minor, these distinctions may play an important role in determining the consumer's choice of *where* to purchase. So, even if there are price disparities among sellers, the buyer may choose a higher-priced offering because of preference for a specific vendor -- because of patronage loyalty.

It can be concluded, then, that if there are substantial price disparities among online sellers of identical consumer durables, the differences might be attributable to either or both (a) shoppers' ignorance of lower prices, and/or (b) preference for particular vendors over others with lower prices. Thus, if and when ignorance of price dispersion is reduced or eliminated by extensive use of online product search and price comparison facilities, the only factors shielding online marketers from direct price competition are those that distinguish one seller from another. Research

indicates that the stores with loyal customers, or with a preference for their brands, can attain higher profits further into the diffusion process.

This study focuses on the *current* frequency with which online shoppers use price comparison search sites. If the frequency is relatively low at this point in time and if very large price differences for identical goods prevail among online vendors, it might be assumed that the disparities result, in large measure, from ignorance of price disparity. Under these conditions, sharply increased use of online price comparison facilities could be expected to result in increased shopper awareness of price differences and markedly greater direct price competition among online vendors. The only recourse for an online marketer to escape such price competition would be to intensify efforts to distinguish itself from other vendors.

Research Focus

The objectives of this research are: (1) To gauge the degree of current internet buyers' dependence on price comparison search engines, (2) to estimate the existing price disparity among identical goods for a variety of consumer durables, (3) to assess the future potential for substantial price rationalization, and (4) to suggest effective marketing strategies for consumer goods marketers faced with increased, direct price competition.

METHODOLOGY

A survey of 1,135 adult consumers residing in the Mid-Atlantic region was conducted in March, 2007. The questionnaires were delivered and retrieved by university student field workers who were assigned a quota, based on the age and sex of the respondents. To qualify for participation, respondents were required to have access to a computer at home and connection to the internet. They must also have made at least two online purchases in the past year. Although no minimum value was specified in the quota, the number and value of purchases were measured in the questionnaire.

Survey Questionnaire

The self-administered survey questionnaire included a list of 16 online shopping actions to which respondents indicated how often they performed each using a 5-point verbal frequency scale. Ten of the most popular price comparison websites were listed in alphabetical order and respondents indicated how often, if at all, they had visited each site during the past year.

Respondent were questioned about their mode of connection to the internet, frequency of computer use, internet and web activity, and online shopping and buying behavior. Lastly, they revealed their demographic status. They indicated their sex, age, marital status, education level, employment category, occupational category, home ownership and family income in the demographic section of the questionnaire. These data measured field worker adherence to quota specifications, as well as indicating the nature of the population represented.

Audit of Price Disparity

If there were, at present, only slight disparities among online sellers of identical consumer durables, it might be concluded that little, if any additional price rationalization could be expected. It would have already occurred. Casual perusal of internet pricing for consumer durables indicates quite the contrary.

ShopBots, Price Comparison and Price Competition

An array of 25 different consumer durable items was selected on a judgment basis to represent a variety of products used in various consumer activities and pursuits. For each product line or class, a specific model was selected and specified by number and description. This was to insure that price comparisons would be among precisely identical items. These items were then submitted to price comparisons using both *Yahoo! Shopping* and *Google Product Search* sites. The highest and lowest price for exactly the same items were recorded from each site during June, 2007.

RESULTS

Existing Price Disparities

The degree of price disparity among existing online sellers of identical goods is reflected in Table 1. Only prices for new goods available *directly* from the online marketers' websites are shown, together with the ratio of high to low price in for each product example. Prices listed by auction sites (e.g., eBay) were ignored. Similarly, prices listed by sites specifying "new and used," (e.g., Amazon) as well as prices for "open box" or refurbished goods were excluded. Nor were prices listed by alternative price comparison sites (e.g., BizRate) recorded.

The various consumer durables are listed in Table 1 from that with the highest price disparity ratio to that with the lowest, based on high and low prices from *Yahoo! Shopping*. The correlations between the high prices and low prices from *Yahoo! Shopping* and *Google Product Search* sites were 0.998 and 0.999, respectively, and there was a correlation of 0.995 between the high-to-low *differences* between the two sites. Even though

the prices from the two sites were highly correlated, a correlation coefficient of only 0.526 indicates there is substantial variation between the two *price disparity ratio* vectors.

Inspection of the type of goods offers little explanation for the differences in price disparity from one kind of product to another. Solar walkway lights had a disparity ratio of 3.74:1 on *Yahoo! Shopping's* site, with a price range of \$35 to \$131. The lowest ratio on both *Yahoo! Shopping's* and *Google Product Search* sites was for a refrigerator, with a ratio of 1.22:1 and 1.20:1, respectively. On the *Google Product Search* site the highest price disparity ratio was 3.43:1 for a laser printer.

The magnitude of the price disparity ratios over the array of goods included in this audit might be regarded as remarkable. It appears online shoppers' ability to compare prices using product search and price comparison sites has had little effect on price disparity. Given the expected growth in both internet use and online shopping, it seems doubtful that such a level of disparity will continue into the foreseeable future.

This condition raises the question of why many online marketers can continue to charge prices far in excess of what their online competitors charge for identical goods. Several factors, noted in the introduction, might explain price differentials among identical goods. While many factors apply especially to conventional retail stores (e.g., store prestige, ambience, location, etc.), very few such distinctions among sellers exist online. Thus, given the close similarities among online sellers and the free and easy access to price comparisons online, it might be assumed either that: (a) shoppers do not know about the price search and comparisons sites, or (b) if they are familiar with them, they do not frequently or routinely use them.

ONLINE SHOPPER SURVEY

Sample Demographics

Table 2 displays the demographic distributions of response for the survey sample. The similarity of proportions of respondents of each sex reflect the sample quota specifications. The responding sample tended to be more educated, affluent, and engaged in more up-scale occupations than the population from which the convenience sample was obtained.

Internet Connection Methods

Survey respondents were asked to indicate their (main) internet connection at home. The results are shown in Table 3. More than 6 out of 10 had a digital cable connection, while only slightly more than 1 in 10 still used a telephone MODEM; a largely obsolete technology. Thus, the lack of a fast, dependable internet connection can not be regarded as a serious limitation on the use of web search and price comparison sites or browsing among complex, content-laden online marketer sites that might be identified by through price comparisons.

Table 1							
Price Disparity Among Online Sellers of Identical Consumer Durables¹							
Product	Yahoo Shopping			Google Search			
	High	Low	Ratio	High	Low	Ratio	
Malibu LZ10131-4 Solar Walkway Lights-----	131	35	3.74	139	50	2.78	
Nikon Coolpix S1 Digital Camera -----	303	109	2.78	372	120	3.10	
Panasonic TH-50PH9UK 50 Inch Plasma TV ---	4,126	1,500	2.75	4,126	1,415	2.92	
Schwinn 2007 Trailblazer Bicycle Trailer -----	260	100	2.60	260	118	2.20	
Seiko SLT095 Watch -----	250	120	2.08	400	149	2.68	
Florsheim Como Imperial Loafers -----	169	82	2.06	169	70	2.41	
iPod Nano MP3 Player 4 GB-----	245	125	1.96	336	165	2.04	
Braun Oral-B 9400 Electric Toothbrush-----	140	85	1.65	140	60	2.33	
Sony STR-DG710 Receiver-----	360	220	1.64	300	209	1.44	
Adidas Copa Mundial Soccer Shoes -----	125	80	1.56	101	76	1.33	
Sony Vaio Laptop PM-760, 2.66 Ghz -----	3,350	2,148	1.56	3,309	2,115	1.56	
Dyson DC15 The Ball Upright Vacuum-----	600	397	1.51	600	277	2.17	
Panasonic Cordless Phones KX-TG1034S-----	179	119	1.50	161	111	1.45	
Cuisinart DLC-2011 Food Processor -----	229	154	1.49	229	123	1.86	
Dewalt DC 750KA Drill Diver Kit, 9.6 Volts ---	133	90	1.48	270	90	3.00	
Panasonic DVD Player S53K -----	125	85	1.47	126	60	2.10	
Braun 8995 360 Complete Men's Shaver-----	180	125	1.44	228	150	1.52	
HP Laserjet Printer 1018-----	129	90	1.43	223	65	3.43	
Travelpro Lite 26" Expandable Luggage -----	170	123	1.38	340	123	2.76	
Hoover Steam Carpet Cleaner HVRC3820 -----	364	277	1.31	366	247	1.48	
Zero Gravity Patio Chair Faulkner -----	140	109	1.28	160	87	1.84	
Britax Marathon Children's Car Seat-----	300	234	1.28	300	220	1.36	
Singer 7442 80 Stitch Sewing Machine -----	200	159	1.26	190	150	1.27	
Rubbermaid Brute 65 Gal. Waste Container ----	167	135	1.24	205	120	1.75	
GE Refrigerator Model PSC23MSWSS -----	2,800	2,295	1.22	2,799	2,341	1.20	

¹ Prices obtained between 6/10/07 and 6/30/07.

² Ratio of the highest price to lowest price if lowest = 1.

ShopBots, Price Comparison and Price Competition

Table 2 Demographic Distributions of the Sample		
	Number	Percent
<i>Sex</i>		
Male -----	565	49.8
Female-----	570	50.2
<i>Age</i>		
Under 35 -----	411	36.2
35 - 50 -----	363	32.0
Over 50 -----	361	31.8
<i>Marital Status</i>		
Married -----	613	54.0
Not Married-----	522	46.0
<i>Education</i>		
High School Only -----	266	23.4
Some College-----	316	27.8
College Graduate-----	378	33.3
Post-Graduate-----	175	15.4
<i>Employment</i>		
Company Employed -----	483	42.6
Education or Government-----	164	14.4
Self-Employed-----	106	9.3
Not Employed -----	382	33.7
<i>Occupation</i>		
Professional -----	168	14.8
Executive, Managerial-----	167	14.7
Technical, Administrative-----	155	13.7
Sales, Marketing -----	146	12.9
Skilled, Semi-skilled-----	117	10.3
Not Employed -----	382	33.7
<i>Home Ownership</i>		
Owner-----	768	67.7
Renter-----	367	32.3
<i>Family Income</i>		
Under \$40,000-----	142	16.6
\$40,000 to \$59,000 -----	117	14.5
\$60,000 to \$79,000 -----	121	15.0
\$80,000 to \$99,000 -----	160	19.8
\$100,000 to \$139,000 -----	99	12.2
\$140,000 & Over-----	170	21.0
Total -----	809	100.0

Total N = 1,135

Table 3 Respondents' Internet Connection Methods		
Method	Number	Percent
Digital Cable-----	718	63
Telephone DSL-----	233	21
Telephone MODEM-----	131	12
Satellite/Other -----	53	5
Total -----	1,135	100

Computer and Internet Use

Survey respondents registered the number of hours per week they spent using the computer at home and at work, time on the internet, and time actually shopping online. These results are contained in Table 4.

Table 4 Hours Spent Using the Computer*		
Activity	Number	Percent
<i>Hour/Week Using Computer at Home</i>		
Less than 5 Hours-----	377	33
6 to 10 Hours-----	308	27
11 to 20 Hours -----	291	26
More than 20 Hours -----	159	14
<i>Hour/Week Using Computer at Work</i>		
Less than 1 hour -----	383	34
1 to 10 hour-----	264	23
11 to 20 hour -----	161	14
More than 20 hour -----	327	29
<i>Hour/Week on the Internet or Web</i>		
Less than 5 Hours-----	337	30
6 to 10 Hours-----	311	27
11 to 20 Hours -----	301	27
More than 20 Hours -----	186	16
<i>Hour/Week Shopping Online</i>		
Less than 1 Hour-----	152	13
One Hour -----	484	43
Two Hours-----	199	18
3 or More Hours -----	300	26

It should be recalled that the sample quota specifications required that respondents to have made at least two online purchases in the past year. Thus, it might be expected that they would be relatively frequent users of computers and the internet. About 40 percent used the computer at home more than 10 hours per week. Nearly 3 out of 10 spend over half their work week on the computer. Time on the internet was also substantial, with more than 3 of 10 spending over 10 hours per week on the net.

Time spent *shopping* online was also substantial. Only 13 percent said they spend less than 1 hour a week shopping on the web, while over a fourth indicated they spend 3 or more hours a week so engaged. This group, then, might be regarded as very experienced computer users and online shoppers.

Online Purchase Values

Respondents recorded the value of their most expensive purchase in the past year as well as the approximate total value of all online buying for that period. These data, displayed in Table 5, also represent high levels of purchase behavior. Only slightly more than 1 in 5 indicated their most expensive purchase was \$75 or less, with about the same proportion reporting total purchases for the year of \$200 or less.

On the high side of the spectrum, a fifth of all respondents reported their most costly purchase at more than \$500 and the same fraction said they had spent more than \$2,000 in total during the previous year. Once again, these data encourage the conclusion that those responding to the survey were frequent and purposeful online buyers of consumer goods, rather than merely casual shoppers of Web offerings.

Online Shopping Behaviors

A list of 16 online shopping actions or practices are shown in Table 6. Respondents indicated how often they performed

ShopBots, Price Comparison and Price Competition

each using a verbal frequency scale ranging from 1, *Very Often*, to 5, *Never*. Both the median and modal values are shown in Table 6.

Table 5		
Value of Online Purchases in the Past Year*		
Type of Purchases	Number	Percent
<i>Value of Most Expensive Purchase</i>		
\$75 or Less-----	241	21
\$76 to \$150 -----	260	23
\$151 to \$250-----	183	16
\$251 to \$500-----	228	20
More than \$500-----	223	20
<i>Total Value of All Purchases</i>		
\$200 or Less -----	247	22
\$201 to \$400-----	209	18
\$401 to \$1,000-----	315	28
\$1,001 to \$2,000 -----	142	13
More than \$2,000 -----	222	20

Using a search site to locate products was the single most often action online shoppers reported, with recording tracking numbers for delivery of purchases was close behind. Respondents also reported they *often* check more than one site for comparisons, bought mainly from favorite online sellers, and read online reviews before buying. Among the actions least often taken, respondents reported rarely if ever visited coupon sites, "personalized" seller sites with their own preferences, wrote online reviews or sent email of product descriptions from seller sites to others.

In view of the fact that using a search engine or site to locate the goods they wanted was the most common practice listed in this study and checking more than one site to make comparisons was the third most often action taken of the 16 listed, it might be

lying these searches and comparisons. Quite surprisingly, this turned out not necessarily to be the case.

Online Price Comparisons

Ten of the most popular online price comparison websites were listed in alphabetical order and respondents were asked how many times in the past year they had visited each site. The results are contained in Table 7. *Yahoo! Shopping* proved to be the most popular product search and price comparison site listed, with the responding sample divided almost equally between those who *never* visited, those who visited *between 1 and 10 times*, and those who visited *more than 10 times*.

Some 22 percent said they had visited *BizRate* at least once while 19 percent indicated so for the *Google Product Search* site. Less than 5 percent had visited either of these two sites more than 10 times. More than 9 out of 10 shoppers had never at all visited the remaining 8 product search and price comparison sites. These results indicate frequent use of a search engine or site to locate goods and frequent checking of more than one site to make comparisons, as reported in Table 6, have more to do with finding the right product or product features than obtaining the best price.

CONCLUSIONS

This study was designed to gain insight into current online buyers use of product search and price comparison websites and to estimate the current degree of price disparity for identical consumer goods. It was argued that high levels of price disparity among sellers of identical goods, coupled with infrequent use of online price comparison sites by today's online buyers, might indicate they remain largely ignorant of price differences.

Given the rapid growth in the use of internet search sites, it appears inevitable that consumers will also sharply increase their frequency of online product search and price comparisons. That may, in turn, result in greater direct price competition among sellers and a substantial growth in price rationalization. Online marketers would then require strategies to protect against vigorous price competition and shrinking margins. Those strategies consist mainly of methods to distinguish the vendor from others and to create and intensify patronage loyalty.

Shopper Price Comparisons

The use of consumer product search and price comparison websites was remarkably low. Those who did use such facilities depended mainly on one site, with nearly all the reported use confined to just 3 of the 10 sites listed in this survey. These results do not *necessarily* mean online shoppers do not compare prices. Price comparisons are quite possible and, no doubt, often accomplished by moving from one site to another or examining alternative products on a given site; however, compared to the ease and rapid-

Table 6		
Median and Modal Frequency Ratings of Online Shopping Actions*		
Statement	Median	Mode
Use a search engine or search site to locate what you want.-----	1	1
Record a tracking number when available and track delivery.-----	2	1
Check more than one site to make comparisons.-----	2	2
Buy mainly from a "favorite" online seller.-----	2	2
Read online reviews of the goods before buying.-----	3	2
Go to one or more price comparison sites or sellers.-----	3	3
Add items to the "shopping cart," then leave the site, returning later.-----	3	3
Add items to the "shopping cart," then leave without ever returning.-----	3	3
Select a delivery method that's faster than the least costly one.-----	3	4
Return to a site several times to see if better prices are offered.-----	3	4
Allow the online merchant to send you email ads and sale bulletins.-----	4	4
Link to a site from an email advertisement you received.-----	4	4
Send email product descriptions from the site to family or friends.-----	4	5
Write reviews of previous purchases when the site allows it.-----	4	5
Register with the seller's site or "personalize" the seller's web page.-----	4	5
Visit an online coupon service site to find discount coupons or "codes."---	4	5

*N = 1,135 - 5-Point Scale: 1=Very Often, 2=Often, 3=Sometimes, 4=Rarely, 5=Never

assumed that price considerations would be a major factor under-

ShopBots, Price Comparison and Price Competition

ity of price comparisons using *Yahoo! Shopping*, *Google Product Search*, *BizRate*, or others, the process is exceedingly laborious, tedious, and time-consuming. The benefits of price comparison sites, in terms of simplicity, speed, and convenience are undeniable.

This creates something of a conundrum: On the one hand, respondents claim they often use search engines to locate goods and visit more than one site to make comparisons. On the other, they seldom use price comparison websites to compare prices. While there may be more reasons for this apparent contradiction, two possible explanations come to mind. The most obvious explanatory factor would be if there were actually very small price disparities among like goods. If price differentials were negligible, shoppers might not find it worth their while to systematically compare prices. Given the remarkably large price disparities identified in this study, that explanation must be rejected.

Table 7
Percentage Visiting Price Comparison Sites
in the Past Year*

Site	Never	1 to 10	Over 10
Yahoo! Shopping-----	36	34	29
BizRate -----	78	19	3
Froogle -----	81	15	4
PriceGrabber-----	90	9	2
NexTag -----	91	7	1
DealTime-----	94	5	1
PriceScan-----	94	5	0
PriceRunner-----	96	4	0
MetaPrice -----	97	2	0
PepperJam-----	98	1	0

*N = 1,135

A close corollary to the "no-large-price-differences" explanation is the *perception* by online shoppers that prices are probably very similar. It is a basic tenet of consumer psychology that people make product choices according to their *perceptions* of the goods, rather than the actual physical or chemical constituents. If that be the case here, then low use levels for price comparison sites result, in substantial measure, from either (a) ignorance of the amount of price disparity from one seller of identical goods to another, or (b) unfamiliarity with the ease and simplicity of using price comparison sites. *But what happens when they find out?*

Price Rationalization

And they will find out. The process by which online shoppers will gain familiarity and experience with price comparison sites and facilities is predictable because it is inherent in the ever-increasing use of search engines in general. Even though a shopper may not be deliberately seeking price comparison, conducting a product search using a site such as *Google* automatically yields links that typically include not only *Google Product Search*, but also a host of other such sites, such as *SHOP.COM*, *BizRate*, or *MSN Shopping*. It is virtually impossible for online shoppers to do any sort of product search without becoming aware of price comparison facilities, if not deliberately, then purely by accident.

The most popular product search and price comparison sites initially list the results of a search by "relevance" or "best match." In other words, they list first those products whose identifiers most closely "fit" the specification the shopper entered, be that generic product name, brand name, or specific model number. Virtually all these sites use a "Sort by . . ." pull down menu allowing the shopper to sort from lowest to highest or highest to lowest price, as well as by other criteria. Once a shopper has done such a sort, for any product of substantial value, it becomes very obvious there are large price differentials. The consumer need not be especially astute to realize that if there are such price differences for this product, there are probably large disparities among sellers of other products, as well. Thus, any naiveté will give way quickly to greater understanding.

There is some degree of circularity involved in the process of becoming familiar and experienced with price comparison facilities. Use of product search sites may lead to recognition of price differentials and the need to compare prices. The need to compare prices may then lead to more frequent use, and perhaps a wider array of product search and price comparison sites. And so the circle goes.

IMPLICATIONS

Disparities among prices for identical goods are understandable when the sellers have conventional retail outlets in different locations. Even when such outlets are in close proximity to one another, differences in store atmospherics, customer service and assistance, store prestige and the overall shopping experience may compensate, in many shoppers' minds, for a higher price than might be available nearby. They may simply decide it is "worth it" to patronize the higher priced store.

Of the many factors that typically distinguish one traditional retail store from another, far fewer apply to online marketers. The vast majority of online marketers appear to provide almost identical product descriptions and displays, transaction and payment facilities, shipping options and return privileges. Thus, most online sellers of consumer goods are especially vulnerable to direct price competition. Once consumers recognize the degree of price disparity, many higher-priced sellers could be forced out of the game by lower-priced competitors unless they distinguish themselves by customer relationship management or some other means.

CUSTOMER RELATIONSHIP MANAGEMENT (CRM)

Customer relationship management incorporates all aspects of interaction marketers have with their customer, including both sales and service activities. Access to the internet and web are rapidly changing the way consumers shop and purchase. New technology such as *Wireless Application Protocol* will permit more and more consumers to interact with marketers and obtain product information instantly on their cell phones, smartphones, pagers and communicators. Viewed from the sellers' side of the equation, current and future communications methods offer online marketers exceptional opportunities not readily available to those who sell exclusively through so-called "brick and mortar" stores. Online marketers can personalize customers' shopping and buying experiences through *relationship marketing*.

Relationship marketing is a strategy focusing on the maintenance and improvement of relationships with current customers

ShopBots, Price Comparison and Price Competition

rather than the more traditional emphasis on acquiring new customers. It uses a wide array of marketing, communication, sales, and customer service techniques to identify named, individual customers and create a relationship between the marketer and those customers.

Patronage Loyalty

It was noted earlier that traditional retail stores differ in their store atmospherics, customer service, store prestige and the nature of the overall shopping experience. These factors may contribute to patronage loyalty and perhaps compensate, in minds of customers, for a higher price than might be available from another store. By contrast, online shoppers are likely to experience much the same circumstances as they move from one website to another. But this apparently does not preclude development of patronage loyalty to an online seller, and such loyalty may also be enhanced by effective customer relationship management.

In this study, buyers rated the frequency with which they "*Bought mainly from a favorite online seller.*" and "*Checked more than one site to make comparisons.*" about equally. The typical respondent said they "*Often*" did both. This reveals a substantial degree of patronage loyalty. Perhaps the surest and most productive way for any online marketer to maintain higher margins would be to cement such patronage loyalty with thorough, effective database marketing.

Database Marketing

Database marketing, an offshoot of *direct marketing*, is a method of interactive marketing that uses databases of existing or potential customers to create personalized messages that promote a product or service. Any *addressable* medium can be used. A database typically includes names, email and/or postal addresses, purchase histories, previous transactional details, and perhaps additional geographic, demographic or psychographic data. These customer profiles are used to identify potential buyers and their preferences in order to target marketing communications more effectively.

Messages about products and services for which consumers have no interest or need are usually called "junk mail" or "spam" by the recipients. Such shotgun approaches to promotion typically earn the sender only the hostility and resentment of the consumers. By contrast, messages selectively targeted to those who are likely to have a need for the goods, and especially to previous customers or shoppers who expressed willingness to get such messages are likely to enjoy a far more hospitable reception. Such communications are helpful to intensify patronage loyalty.

Special Loyalty Programs

While they share many of the same objectives and methods, some loyalty programs have special features and specific names that identify their characteristics. These special marketing programs can be seen as subsets of both *customer relationship management* and *database marketing*. Used effectively, they also support patronage loyalty to online marketers.

Frequency marketing.—Any program to entice customers to purchase frequently or to reward them for doing so. Frequency programs, also called loyalty programs, typically provide customers with rewards based on how frequently they buy. The benefits to patrons have to be sufficient to make customers want to *join*, to *provide* the required *information* about themselves,

and to *maintain* membership. The information sought may simply be the consumer's name and email address, or it may be a much more substantial set of demographic and lifestyle data. Once a customer has "joined" and earned "points" or received other potential benefits for continued patronage, loyalty may be significantly enhanced.

Affinity marketing.—A program to target a specific category of customer based on occupation, social membership, religious preference, or establishing buying patterns. Messages may be delivered via e-mail communications or offline media. This form of relationship marketing assists online marketers to target more effectively. An additional advantage is gained by the *personalization* of marketing communications because of the recipients' *identification* with the specific affinity group to which they belong. To the degree members value the group affiliation, they may increase their loyalty to the marketer recognizing their group identity.

CUSTOMER RETENTION

Patronage loyalty of the kind that will offer online marketers some protection against strident price competition is all about customer retention. This is the essence of *customer relationship management*. In practice, increased patronage loyalty and extended customer retention are almost synonymous.

Customer lifetime value.—The first step is to categorize customers according to worth to the marketer. The marketer can then choose which relationships deserve greater attention and investment, as well as which require a different approach.

Customer retention measurement.—A company's *customer retention rate* is simply the percentage of customers at the beginning of a fiscal year that remain customers at the end of it. For instance, an increase from 80% to 90% in retention rate means doubling the average life of a customer relationship from 5 to 10 years. Comparisons between products, market segments, or over time can be measured by this ratio.

Reasons for defection.—There are several methods for learning the reasons customers defect. Surveys, focus groups and individual interviews of former, as well as current customers are helpful. These methods are available to both online and offline marketers, but online marketers have a unique source of information: *buyer ratings and evaluations*.

In this study, the typical respondents said they sometimes or often read reviews, although they rarely or never wrote them. As with other forms of complement and complaint recording, it seems likely that those who are extremely favorable, and especially those who are extremely unfavorable to the goods or seller will provide evaluations at higher rates than those at medium levels of satisfaction or dissatisfaction.

Just as online shoppers have access to online buyer ratings and evaluations, so, too, do online marketers. This is a rich source of information about seller performance, both that of the online marketer and that of competitors. Analysis of both favorable and unfavorable customer ratings and evaluations can shed light on why customers remain loyal or defect. While summary analysis of ratings may be revealing, content analysis of text evaluations and comments may be richer and more meaningful. It is important to look not only at what is viewed unfavorably by customers so negative factors can be corrected, but also to study

ShopBots, Price Comparison and Price Competition

what was seen as positive, so those features can be extended and projected to other products, customers, and situations.

Corrective action plans.—There is a big difference between knowing what is wrong and *doing something* about it! The more strident the complaints, the more necessary it is to take corrective action. While individual complaints may be harbingers of problems yet to arise, they seldom deserve much attention. It is to the *patterns* of response that marketers must react promptly and effectively. Sometimes the remedy is as simple as changing the menu on the incoming automated call director. But at other times the remedial action may be as far-reaching as abandoning an entire delivery system in favor of a more effective one. Unfortunately, there is often a high correlation between how major the remedy is and how important it is to make the change in order to maintain customer loyalty.

In Summary

- Current online shoppers do not often use price comparison sites.
- Very substantial price discrepancies among online sellers of consumer durable goods do currently exist.
- Consumer awareness of existing price disparities will unquestionably increase with the increase in use of search sites and facilities.
- Price discrepancies will become increasingly apparent with the increase in use of product search sites.
- Increased price competition is virtually inevitable, concomitant with growth in familiarity and experience with price comparison sites.
- Despite similarities among online vendors, online shoppers do report loyalty to their "favorite" sellers.
- The most potent protection against direct price competition appears to be creation of patronage loyalty through *customer relationship management*.
- *Database marketing* offers the most promising avenue for both obtaining new customers and building existing customer loyalty.
- Marketing programs such as *frequency marketing* and *affinity marketing* can be used effectively to enhance patronage loyalty.
- Customer retention is best insured by (a) assessing customer lifetime value, (b) measuring customer retention, (c) discovering reasons for defection, and (d) taking corrective action.

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ShopBots, Price Comparison and Price Competition

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