

INSIGHTS AND PERSPECTIVES TO DRIVE COMMERCE

MULTI-DEVICE OWNERSHIP: IMPLICATIONS FOR RETAILERS AND CONSUMERS

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By John Sheldon, Head of Strategy for Marketing Solutions, eBay Enterprise
Elizabeth Zietlow, Head of Usability, eBay Enterprise

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Introduction

While every aspect of the digital world continues to advance at a rapid pace, the adoption of mobile technologies is particularly striking. A wide range of form factors and devices has revolutionized virtually all facets of consumer behavior. This has in turn put pressure on retailers, marketers, designers and every other corner of the retail industry to better understand just how consumers are using their ever-increasing arsenal of devices.

To gain a more comprehensive understanding of how digitally connected consumers shop, eBay Enterprise conducted industry leading user research, revealing critical insights that will enhance the connected multi-platform shopping experience.

Led by degree trained and expert usability professionals, the Usability team within eBay Enterprise's Marketing Solutions Group conducted a six-week diary study during the 2012 holiday season. The study consisted of participants nationwide with both qualitative and quantitative analysis.

The study revealed some surprises that suggest consumers' approach to managing their shopping process with multiple devices isn't "one size fits all." While consumers have individual preferences, they also have distinct patterns of how, when, and why they reach for devices when browsing and making purchases. These subtle nuances are pivotal to understanding how consumers use their multiple devices for both online and offline shopping, and reveal key insights for retailers to increase conversion during the holidays and throughout the year.

KEY INSIGHTS

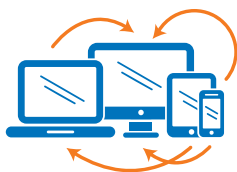
Consumers with multiple devices—both “traditional” (laptops/desktops) and “mobile” (smartphones and tablets)—make choices about which device to use based on proximity/availability, intent, and their level of comfort with the device: during the study 76% of participants used their smartphone for browsing and other shopping-related tasks and 68% of tablet owning participants used their tablet during the study to browse.



79%

of purchases were made on a traditional device.

For quick ecommerce browsing, the closest device wins. But as purchase commitment increases and more research is required, traditional devices are still dominant: 79% of purchases were made on a traditional device and 21% were made on a tablet or smartphone.



40%

switched between device types to browse.

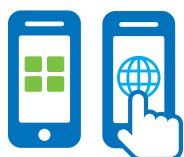
While consumers increasingly turn to “non-traditional” (smartphone and tablet) devices out of convenience—and as part of their daily routine—to initiate their shopping experience, they often use more than one device in their evaluation and purchase of a single item: 40% of participants reported switching between device types to browse for the same item.



53%

used their smartphone in the home to browse.

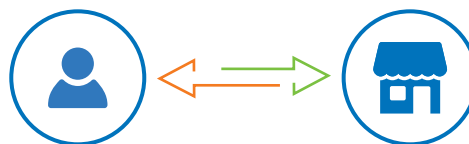
Smartphones are used everywhere—in-store for browsing and, more often, in-home for browsing (53% used their smartphone in the home to browse)—while tablets are used to fill some of the functionality gaps between smartphones and traditional devices. Both devices have limitations.



4X

more recorded use of device browsers than device apps.

With a few exceptions, retail consumers prefer to use their mobile device browser over apps. In fact, participants browsed for items four times more often using their device browser than an app.



Device ownership means more ways for consumers to connect with retailers but not necessarily more technical sophistication, use of a device, or the same amount of use across devices.

This study highlights the critical need to develop a seamless buying experience on all potential platforms. In that vein, the following are considerations for keeping pace with, and staying ahead of, the user market.

1. Evaluate Consumer Experience Across Devices

Evaluate which, if any, immediate changes should be made to the interface to create a more successful consumer experience across devices rather than waiting for a larger redesign effort. When considering a larger design/redesign or site optimization, most retailers should focus first on their mobile browser design over apps, ensuring that their mobile and tablet sites are fully optimized.

- Consider sites like Google Maps, where the mobile experience is just as good as the app and consistently supports the user at any point of interaction, i.e., no matter where they want to engage.
- For additional evidence indicating the value of mobile optimization, in a recent eBay Enterprise usability study on tablet ecommerce, the tested optimized site outperformed the non-optimized site not only in overall usability, but also in post-purchase brand perception.

2. Encourage Cross-Device Convenience and Functionality

Encourage, but don't require, account creation and promote cross-device convenience and functionality. To encourage this activity, retailers should ensure that it's both easy and beneficial, which means spanning account connections over multiple apps and interfaces. This includes the incorporation of external tools such as mobile wallets or universal/social authentication logins.

- Retailers should consider tactics that encourage account creation, such as exclusivity, or promote a continued relationship through rewards or point systems. For example, the website Fab.com serves up unique content and curates 'everyday design' products and has managed to motivate account creation for consumers who seek the exclusivity associated with that brand. Alternatively, the shoe retailer DSW uses a points system to encourage account creation and rewards consumers who make shoe purchases with them by giving them "cash" towards their next purchase.
- No matter what tactics are used to encourage account creation, retailers should avoid the hurdles created by mandatory sign-ins. In general, require less of the user when creating an account by limiting the required fields to the basics, e.g., name, email, password—especially on mobile devices where form entry is more cumbersome.
- In the path to purchase, rather than immediately requiring the user to create an account, insert account creation fields in-line with other required form fields, i.e., don't require account creation as the first step in checkout; insert the fields in the flow of the checkout process. For example, the standard convention is to provide an email address for order and shipping confirmation. Insert the "create password" field after the email field.

3. Support Device Switching

Support the inevitable browsing interruptions caused by device switching. Consider interface enhancement and features like “send to phone” links, account-based persistent carts, “save and send cart,” and “email” buttons on mobile devices prominently displayed on product pages. These solutions should address all levels of purchase commitment (from low to high) and will help consumers shuffle content between devices while keeping them connected throughout the shopping experience.

- The features described above leverage native and downloaded apps on mobile devices, and tap into existing behavior. For example, accessing email is a common activity across device types.
 - Include an “email” button on smartphone and tablet product pages that, with one click, launches the mobile device email application and allows the consumer to email themselves, or someone else, a product. This opens the door for not only a connection between devices, but also an opportunity for an email reminder marketing tool — “You were looking for X, still looking?”
 - Use social links to pin/post/share and, if the consumer already has the app, launch that app rather than a mobile site.
 - Consider functionality that would connect the consumers' cart from one device to another, such as entering a simple code through SMS.
- As an example, eBay Marketplaces refined its listing flow to support cross-device use by allowing users to initiate a listing on one device and resume on another, increasing first-time listings by 67%.

4. Look for Innovation and Validate

Going forward, retailers should be on the lookout for innovative ecommerce approaches in technology that support cross-device sharing by providing consumers with tools for passing information (e.g., “bumping,” synched carts, Bluetooth syncing, device “slinging”). Each company needs to make its own determination on how these offerings meet their needs and their consumers' needs. Ultimately, managing the shopping process with multiple devices isn't a “one size fits all” solution for consumers or retailers. Since every business case is different, validating interface changes and site enhancements with consumers is critical.

Overview

Over the course of the six-week study, which ran from November 19 to December 28, 2012, 55 multi-device-owning consumers aged 18-55 maintained daily entries of their shopping and browsing behavior. All participants owned a smartphone and a laptop/desktop; 34 participants also owned a tablet device. They submitted a total of 2,153 diary entries, and of those, 726 contained information related to browsing and purchasing behaviors. During this period, participants browsed for 764 items and purchased 1,483 items.

In order to analyze the data, researchers read the diaries and manually validated the quantitative and qualitative data. The qualitative data was thematically coded to identify the most salient participant behaviors.

Based on the analysis, the research team identified key factors that suggest a “mental model” for how multi-device consumers use their devices to shop.

For quick browsing tasks, the closest device wins

The study identified a simple factor for device selection—participants used whatever device was closest when triggered to do “quick” browsing.

In the product consideration lifecycle—from initial consideration to purchase—participants used different devices between low-commitment browsing and higher commitment activities, such as more extensive browsing or a purchase.

Low-commitment browsing was often an instinctive action, perhaps a response to a TV commercial or a memory sparked by an unrelated conversation, thus prompting the user to look up a potential deal or item. In these cases, participants showed no signs of committing to the purchase on the device chosen; instead, the device was chosen almost indiscriminately by proximity.

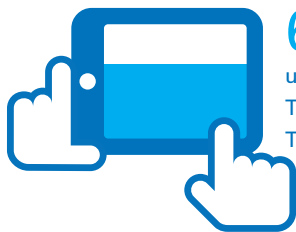
Not too surprisingly, participants favored smartphones and tablets as their devices of convenience, particularly at home. During the study, 53% of participants reached for their smartphones at least once while browsing at home, while 68% of tablet owners used their tablets to browse.



53%
used their
SMARTPHONE
TO BROWSE.

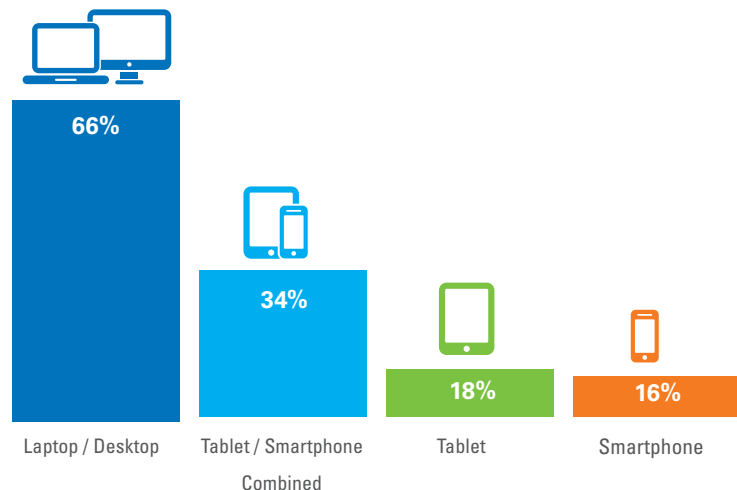
“If someone had the computer or I was too lazy to get up from my room, I would just use the iPad. It was awesome for just looking around for stuff.”

– 40-year-old iPad owner



68%
used their
TABLET
TO BROWSE.

Participants Logged BROWSING ONLINE USING A DEVICE 500 TIMES WHEN IN THE HOME



Laptops and desktops still reign as dominant shopping devices

Despite the extensive focus on mobile devices and their increasing popularity, “traditional” devices still played a key role in the shopping process for study participants. This was evident when participants focused on higher commitment activities.

High-commitment activities, unlike low-commitment browsing where devices were used indiscriminately, signal a greater determination or purpose to conduct extensive browsing and/or make a purchase. In this case, participants more often preferred traditional devices—of the 225 recorded online purchases, 79% were made on a traditional device, while only 13% were made on a tablet and 8% on a smartphone.

225 Online PURCHASES



Made on a laptop/desktop



Made on a tablet /smartphone

“I chose the laptop because this is typically where I do actual online shopping, plus it was convenient at the time to sit down and visit multiple websites to compare sizes and prices and view them in separate tabs.”

– 38-year-old Toshiba laptop and Samsung Focus Flash owner

Traditional devices were preferred because of two critical factors: familiarity and functionality. For participants in the study, familiarity was all about comfort, and the level of comfort was based on the length of device ownership and usage (study participants owned traditional devices for almost twice as long as their mobile and tablet devices).

Participants also favored traditional devices because they provided greater functionality, including larger screen size, keyboards, access to full sites, and the ability to evaluate multiple sites at once and with greater ease.

“I use my laptop when I am doing intense browsing—it has a bigger screen and is easier to navigate.”

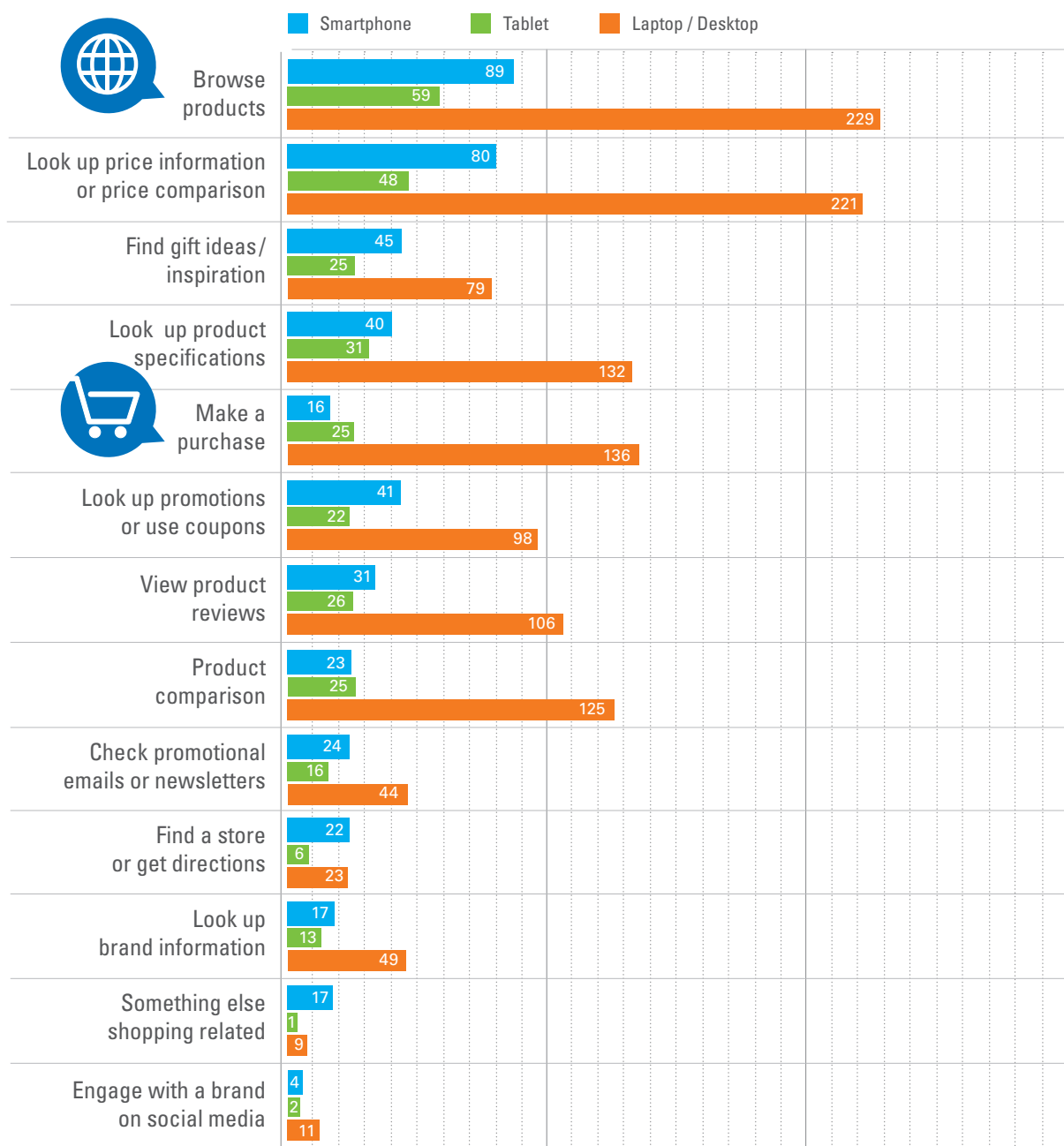
— 46 year old Macbook Pro and iPhone 5 owner

DETAILED STUDY FINDINGS

Activities BY DEVICE TYPE

At the end of their daily diary entry, participants were asked two survey questions to capture which device they used that day, if any, and what shopping related activities were done that day on the device(s) used.

The following table illustrates the similarity in browsing tasks across devices, and the tendency to reach for traditional devices more frequently when making a purchase.



* The numbers indicate the total count for each device for the listed activity.

Multi-device ownership allows for "switching" and "resume later" behavior

With the increasing accessibility of multiple devices, consumers frequently use more than one device type in the evaluation and purchase of a single item.

Multi-device ownership creates easier ways for consumers to both initiate and abandon the browsing and purchase path. Seventy-eight percent used more than one device during the study to browse or make a purchase, and 62% of participants used more than one device while in the home to browse.



In the qualitative diary entries, 40% of participants noted switching between device types, e.g., initiating their browsing on one device type, often a smartphone or tablet, and then switching to a more functional device as their research intensified or when they were ready to execute the purchase. The switch was either immediate in order to "upgrade" the device or delayed, as participants initiated their browsing of an item on one device, only to resume later on a different device type.

"I first started browsing between classes at school (on smartphone) and then continued on my laptop when I got home."

– 23-year-old Galaxy Note owner

The immediate switch was often triggered to avoid the technical limitations of the current device, e.g., seeking a larger screen size or tactile keyboard, or for connectivity issues.

"I was at home in my home office on my trusty laptop. I had tried earlier in the day to do this with my smartphone but I had a headache and found the touch screen a little annoying as it took too much concentration."

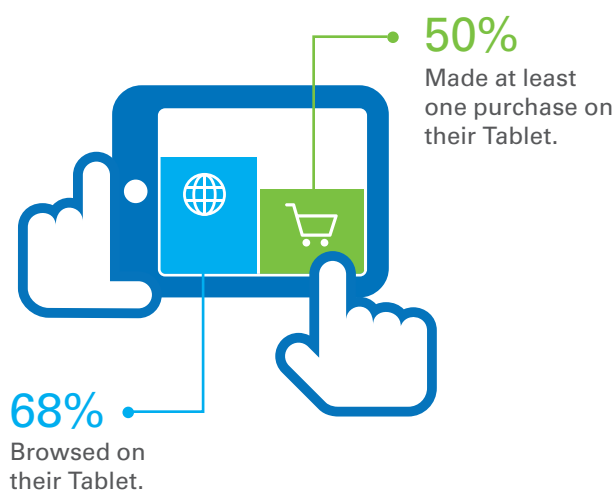
– 46-year-old Kyocera Hydro owner

Participants who "resumed later" started their browsing on one device because of convenience and resumed their browsing later when a traditional device was available.

Tablets are filling in the functionality gaps between traditional devices and smaller devices, but still have limitations

For low-commitment browsing and some online purchases, tablets are seen to offer similar utility as traditional devices. In addition to the benefits of proximity and convenience, they're also just large enough and easy enough to use. They also have interfaces that offer similar functionality to traditional devices, which our data suggests helped participants migrate their "browsing and purchasing" routines and expectations from traditional devices to tablets.

Nevertheless, participants' qualitative responses also identified several hurdles to completely replacing traditional devices with tablets. The problems include the lack of a designated keyboard, the number of sites that have not been adequately optimized for tablet use, a cumbersome checkout process, concerns over security, and continued comfort with older devices.



"My tablet is useful for browsing the internet. I occasionally make purchases on it if I am making a single purchase. I prefer my laptop when I know I have multiple purchases to make, such as with holiday gifts, because it is faster to order. I would probably use my tablet more if I had a keyboard for it."

– 31-year-old iPad owner

Smartphones are everywhere devices

“My phone is useful for quick browsing, alerting me to promotional emails and comparing prices. However, it is not useful for doing more in-depth searches because of the small image/text.”

– 31-year-old iPhone 4s owner

Many participants considered their smartphone an “everywhere” device to be used not only “on the go” but also at home, work or school, as a tool to supplement their shopping experience. In fact, twice as many participants in the study (53%) used their smartphone to browse in the home than used their device at the store (25%).

Similar to their tablets and traditional devices, participants used smartphones to browse and make purchases. However, unlike other devices used in the study, smartphones were considered more “portable” and “connected” (e.g., automatically have Wi-Fi or 3G capabilities), and they had a greater reach that allowed participants to link to multiple channels. However, this increases dependence on the carrier to support the retailers' designed experience.


“My smartphone was equally useless in shopping for myself and for gifts. The web pages take a long time to load and it is a pain in the butt to read and browse on such a small screen. I sound like an old man.”


– 18-year-old HTC One V owner

Smartphone USE BY ACTIVITY

 **25%**
made at least one **purchase** using their smartphone.

 **53%**
used their smartphone in the home to **browse**.

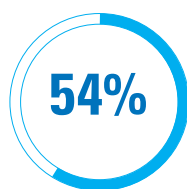
 **76%**
used their smartphone during the study for **shopping-related activities**.

 **25%**
used their smartphone in the store during the study to **price compare or use as a shopping tool**, such as taking photos or referring to shopping lists.

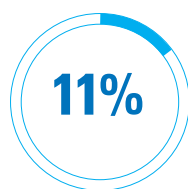
“I took a photo of our existing towel to make sure I got the same design and color in store. I checked the photo in the store and compared it to the item.”

– 46-year-old iPhone 4s owner

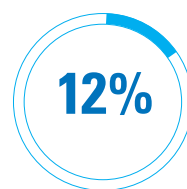
Smartphone used FOR BROWSING BY LOCATION



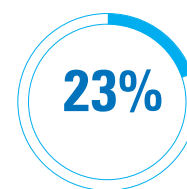
At home



At work



At a store



On the go

*Percent of total logged instances of smartphone use by location when browsing, i.e., during 54% of the recorded instances, the participant was in their home when using their smartphone to browse.

Although they are considered the “everywhere” device, during this study only 8% of purchases were made on smartphones. It’s not that consumers don’t want to make purchases on smartphones, because they do, particularly when considering purchasing items in a pinch, or when they have accounts/relationships with a retailer that makes checkout easy.

However, when a more functional device was available, participants often turned to those devices first. The decision to use a traditional device or a tablet was often triggered by various

smartphone constraints and limitations in participants’ shopping process. Specifically, many retail websites were not optimized for the smartphone and the devices have their own drawbacks—small screens, touch sensitivity, keyboard limitations and data speeds.

“I don’t use my phone much for shopping, just for doing light research. It has limited functionality, so I don’t buy anything via its interface.”

– 32-year-old Nokia e73 owner

Retail consumers use mobile device browsers over apps

Participants browsed for items four times more often using their device browser than an app. This shouldn't be too surprising, as traditional online shopping is dominated by the search function, and as consumers opt for newer devices, they extend and transfer their established habits to new devices.

Furthermore, the rationale for an app download and use is contingent on both the consumer's relationship with the brand and the anticipated utility the app provides. In other words, the more consumers anticipate using a particular retail app, the more likely they are to download and use it. As a result, participants typically had more mass-merchant apps (e.g., eBay, Amazon, Wal-Mart) and were more likely to have apps with an "on-the-go" shopping utility, such as QR code scanning.

APPS VS BROWSER

Did you use your phone/tablet web browser or an app?



*Participants were asked this question for each item they browsed using a smartphone or tablet.

"I decide which apps to download based on how much I really shop at that store, the rating of the app and the price of the app."

– 25-year-old iPhone 4 owner

Consumers use devices to "showroom" and "presearch"

Active Presearching: "I wanted to make sure the product I had in mind met my criteria... before I went to the store I read CNET reviews and went to Amazon to see pricing and reviews, filtered cameras by features, best review and price...I decided to purchase in store because this is the best I am going to and within the price range I am looking for"

– 48-year-old Dell Inspiron laptop owner

While consumers clearly have individual shopping preferences, their diary entries for browsing and purchasing revealed two process themes: "showrooming" and "presearching."

There are many nuanced industry definitions of showrooming, for the purposes of this research the term was defined as viewing a product in a store as part of the shopping process and continuing the research online prior to making a purchase. While some definitions include the use of a device in the store as part of the showrooming behavior, this definition does not limit or require in-store device use.

Participants also described "presearching" as part of their shopping process—using a device at any location other than brick-and-mortar stores to research a product online prior to visiting the store.

The described showrooming and presearching behaviors were both active—intent-driven, more highly committed to the purchase, and final purchase channel motivated, e.g., knowing that the final purchase would be made online—and passive, or lower commitment to the immediate purchase and casually triggered, e.g., initial consideration triggered by a browsing visit.

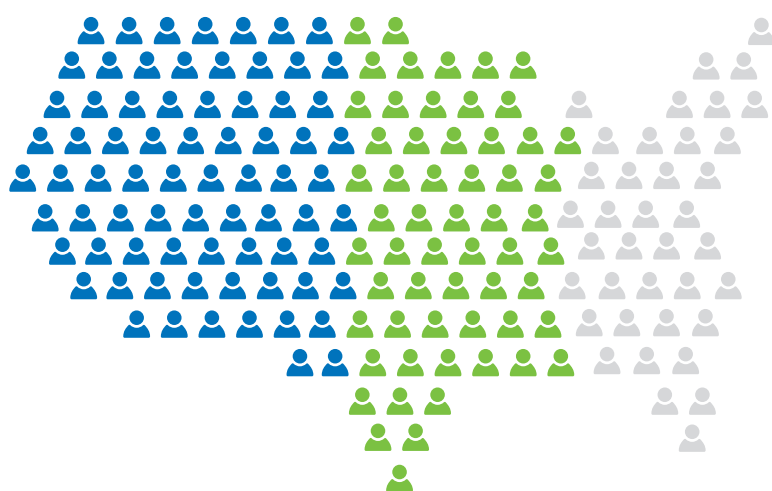
Consumers are equally armed, but not equally savvy

“I guess I am afraid of the portability of it and the probability of security issues. I am also 40, so my vision isn’t happy trying to read it. I don’t like the touch screen because my fingers are fat. I have really bad reception in my area. I got frustrated easily by all of these things.”

– 40-year-old iPad owner

While smartphones and tablets have become deeply embedded in the mainstream, full awareness of the device capabilities is still elusive—consumers have varied knowledge of their devices and therefore may not be able or inclined to take full advantage of the functionality offered. These challenges extend to all age groups, including younger consumers.

Let’s consider the data by looking at those participants who did not record using their devices over the 6-week period. Thirty-two percent of tablet-owning participants did not report using their tablet for shopping-related activities, and 24% of study participants did not report using their smartphone for these activities. We’re not suggesting that these consumers have never used these devices for a shopping purpose, but rather that device ownership does not necessarily lead to concentrated use. For the record, the Pew Internet Project reports that 45% of American adults own a smartphone (as of January 2013) and 31% of American adults own a tablet (as of December 2012).



45%
of Americans
OWN A SMARTPHONE.

31%
of Americans
OWN A TABLET.

MULTI-DEVICE OWNERSHIP: IMPLICATIONS FOR RETAILERS AND CONSUMERS

Over the 2012 holiday season, eBay Enterprise's Usability Group conducted a comprehensive diary study of consumers' shopping experiences across multiple devices.

CONSUMERS CHOOSE THEIR DEVICES BASED ON

46% PROXIMITY

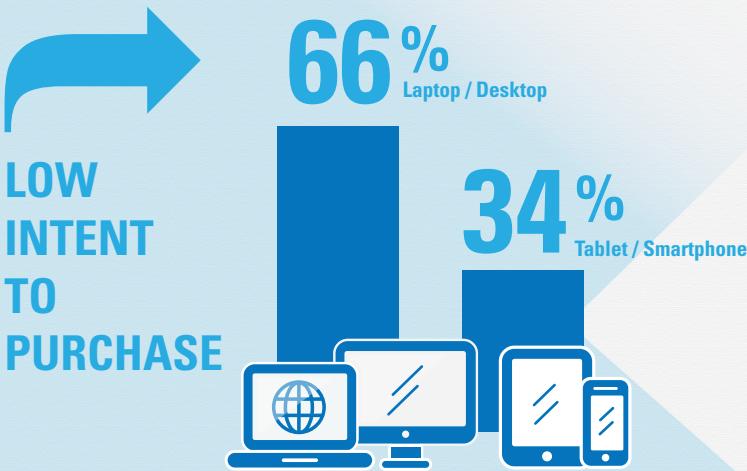
15% INTENT

12% COMFORT




LAPTOPS & DESKTOPS STILL REIGN AS DOMINANT PURCHASE DEVICES



FOR QUICK BROWSING THE CLOSEST DEVICE WINS



MULTI-DEVICE OWNERSHIP ALLOWS DEVICE SWITCHING BEHAVIOR

-  62% Used more than one device type while in the home to browse.
-  78% Used more than one device to browse or make a purchase.
-  40% Used more than one device to browse for the same item.

FOUR TIPS FOR CREATING A SEAMLESS SHOPPING EXPERIENCE

1 Evaluate

Evaluate which, if any, immediate changes should be made to the interface to create a more successful cross-device experience.

2 Encourage

Encourage (but don't require) account creation and promote cross-device convenience and functionality.

3 Support

Support the inevitable browsing interruptions caused by device switching.

4 Innovate

Be on the lookout for innovative ecommerce approach in technology that support cross-device sharing.

Conclusions

The multi-device usage landscape is rapidly evolving. Information on how consumers are adopting and adapting their shopping process based on devices is important to gather and monitor, especially as new and varied devices emerge (e.g., smartphones with larger screens, tablets, and hybrid devices, etc.).

The study indicates that while mobile technologies now dominate attention, the buying process for many consumers is more complex. Since each device offers varying degrees of functionality and convenience, multi-device ownership makes it easier for users to initiate and abandon a particular browsing or purchase path.

This has different implications for different constituencies: as consumers opt for one device over another, retailers must contend with more interruptions and device-based abandonment points in the pursuit of checkout. The need for seamless switching between different devices to ensure higher conversions and positive brand perception puts the onus on retailers to create a consistent user experience, regardless of the range of form factors, websites, operating systems and apps used.

Methodology

This study tracked the holistic shopping behaviors of digitally connected consumers during the holiday shopping season. The goal was to identify the critical differences and nuances of multi-device use in commerce.

In total, 55 participants were asked to keep a daily diary in the form of a survey to track their holiday shopping device use over a six-week period—from November 19 until December 28, 2012. The survey contained both open-ended qualitative questions and closed-ended quantitative questions. In addition, the participants completed an introductory survey and a wrap-up survey.

As survey and diary data are subject to the limitations of self-reporting, the research team reviewed and manually validated the quantitative data and the qualitative diary entries.

In order to track holistic device use, all participants owned a laptop/desktop and a smartphone, and 34 also owned a tablet. Participants ranged in ages from 18 to 55 and were recruited from a mix of states and community types (rural, suburban, and urban). All participants were shopping for at least three immediate family members and at least three additional family members or friends. They were all planning to make purchases in-store and online, and planning gifts other than gift cards for the majority of their recipients.

To supplement the daily diary entries, 13 diary study participants were also invited into our eye-tracking usability lab to undertake complementary usability research. In those sessions, the participants were asked to talk through some of their diary entries, complete a device audit related to app ownership and use, and perform an email audit of how they evaluate promotional email on their devices. Those results were incorporated into our findings here.

Special thanks to Amber Otero, Head of User Experience, eBay Enterprise; Palak Desai, Usability & Strategy manager, eBay Enterprise; and Jackie Weeks, Usability & Strategy specialist, eBay Enterprise, for their contribution to this project.



+610.491.7000 | www.ebayenterprise.com | insights@ebayenterprise.com

About eBay Enterprise's Usability Group

As an independent and objective voice within eBay Enterprise's Marketing Solutions organization, the Usability Group collects user data, uncovers usability obstacles, and provides recommendations that make digital experiences better and, ultimately, more successful. Led by degree trained and expert usability professionals, the group applies their proven user-directed research methodology to observe how people interact with digital interfaces in order to validate and discover opportunities for improving the user's experience. We operate three world-class usability labs – in New York City, Philadelphia and Silicon Valley – each equipped with leading Tobii™ eye tracking technology.

Contact

For more information about this study, or to inquire about usability testing, email Elizabeth Zietlow, Head of Usability, at usability@ebayenterprise.com.

About eBay Enterprise

eBay Enterprise is a leading global provider of omnichannel solutions, including commerce technologies, order management, retail operations and marketing services. Our comprehensive and modular solutions enable brands and retailers of all sizes to deliver consistent consumer experiences across digital and physical retail touch points throughout the entire purchase lifecycle by engaging potential customers, converting browsers into buyers and delivering products with speed and quality. Our expertise in commerce and omnichannel solutions provide our clients with the flexibility and control they need to accelerate sales growth and win with today's digitally connected consumer. eBay Enterprise is an eBay Inc. (Nasdaq: EBAY) company.

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