Institute for Behavioral Economics and Consumer Choice (IBECC)

Report on IBECC Roundtable 2
October 4, 2018, Ithaca, NY

Decoding the Omni-Channel Consumer: The Impacts of Technology, Trust and Privacy
As retail increasingly migrates online, the relationship brands have with consumers is undergoing a major transformation. With the growth of e-commerce, consumers have more choices in product selection than they’ve ever had before. They can order a seemingly unlimited array of products on multiple personal devices, including the smart speaker that’s become a fixture in American homes. Furthermore, they can buy more products at discount prices as their inboxes are flooded with personalized ads from companies tracking their online behavior.

But what are the consequences of this widespread embrace of online shopping? While e-commerce allows retailers to compete with online giants such as Amazon, the transition to online retail raises concerns about the loss of privacy for consumers. As advertisers harvest personal data online, consumers are seeking ways to control the information that is being mined without their control. Since there are no federal laws governing the use of personal data in the United States, however, the ability of consumers to protect their online information is limited.

The Institute for Behavioral Economics and Consumer Choice (IBECC) at Cornell University held a roundtable on October 4 to examine the opportunities and challenges retailers and consumers face in this new digital frontier. A group of 25 industry executives, consumer behavior researchers, scholars, and graduate students attended IBECC’s second roundtable at Cornell University’s Ithaca (NY) campus.

The roundtable opened with an overview of the current trends in retail and the strategies companies are using to interact with the omni-channel consumer. The conference then explored the impact technology is having on consumer confidence as issues about privacy and fairness have emerged. The roundtable ended with a series of participants’ suggestions for potential research and collaborative projects IBECC could conduct to provide industry with new insights on navigating the world of omni-channel retail.

Evolution of Online, Offline and Omni-Channel Retail

Online retail sales in the United States nearly doubled to $452 billion between 2012 and 2017 and are projected to repeat this pattern within the next five years. The growth has been fueled primarily by sales made through mobile devices by younger, digitally native adults, said Jura Liaukonyte, the Dake Family Associate Professor at the Charles H. Dyson School of Applied Economics and Management at Cornell.

Yet despite this explosive growth, online sales only comprise 8.9 percent of total retail sales as consumers still do most of their shopping offline. “While we were fearing that brick and mortar was disappearing, it’s actually not,” Liaukonyte said. “It’s alive and well and evolving.”

While two thirds of consumers make a majority of their purchases in a store, their preferred mode of shopping is largely explained by age. A study...
shows that 56 percent of younger consumers — between the ages of 18 and 44 — primarily shop in stores, a proportion that increases with age. Among shoppers between the ages of 55 and 64, 78 percent make most of their purchases in a store, compared to 83 percent of those over 65.

Although online retail has changed the way retailers operate, new research shows that innovations in traditional retail channels, such as warehouse clubs and supercenters, have had a greater effect on retail sales than e-commerce, Liaukonyte said.

“While we are seeing this absolute growth in online retail, it doesn’t seem like it is necessarily affecting the proportion of the sales that is happening in traditional retail channels,” Liaukonyte added. “But clearly there are winners and losers.”

Online consumers are two to four times more price sensitive than customers in traditional markets, research shows. And urban consumers are more price sensitive when shopping online than rural shoppers, but the reverse holds true when shopping offline, Liaukonyte said.

For omni-channel retailers, which operate brick-and-mortar stores and also serve consumers online, the key is to create a seamless customer experience, connecting all possible channels and integrating inventory management systems across online platforms, according to Liaukonyte.

“It’s really about making it easier for consumers to move from one channel to the next, especially given the fact that these types of consumers who shop across channels are very valuable consumers for retailers,” she said.

The Conflict Between Personalization and Privacy

Marketers have developed integrated platforms that track consumer’s online behavior, which allows them to send personalized ads to their devices. But that level of personalization comes with a tradeoff for the consumer — the loss of their privacy online.

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One growing strategy among marketers is to leverage third-party online marketplaces, where companies routinely sell consumer data and access to audiences. Marketers rely on these companies to build out audiences and enhance targeting for campaigns, Sarelson said.

Companies also extract personal information from consumers from the free apps they download on mobile devices. Yet these apps, from YouTube to Google Maps, are not really “free” because consumers are trading personal data for the services the platforms provide, said Zhouyu (Joy) Wu, a PhD student in the Department of Applied Economics and Management at Cornell.

“The big question here is: Are consumers making informed choices?” Wu said. “If consumers are signing away their information and their ownership of that information, are they making that choice in an informed way?”

In the United States, the use of online consumer data by marketing companies is controlled through a system of self-regulation. Two organizations — the Network Advertising Initiative (NAI) and the Digital Advertising Alliance (DAA) — allow consumers to opt out of venues created by third-party digital advertising companies to collect their personal data.

Consumers, however, are often unaware of these organizations or the process to request being removed from third-party companies, Sarelson said. One way to address consumers’ concerns surrounding online privacy would be for companies to offer them the option of paying higher prices for products or services if their data is not monetized, Sarelson added.

In 2016, the European Union enacted a set of regulations called the General Data Protection Regulation (GDPR), which mandates that data cannot be made available publicly without explicit consent of consumers. Under these regulations, companies must disclose the purpose of collecting the data, the length of time it is being retained, and whether the information has been shared with third parties.

Sarelson said the marketing industry in the United States should discuss how to create better safeguards that offer privacy protection to consumers’ online data. Yet he and other roundtable participants noted a disconnect between consumers’ desire to protect their privacy online and their willingness to invest the time and effort to opt out of marketing databases.

Another complication is that younger consumers are more willing to allow marketers to harvest their personal data. In an advertising class Liaukonyte has taught at Cornell for the past ten years, she conducts an annual survey of the students and asks how they feel about making their personal data available in exchange for services online. What the survey has shown is that students are increasingly less concerned about the loss of their privacy online.
Within the last several years, students are increasingly accepting that they need to give some data in order to get something in return for free,” Liaukonyte said. “I think their attitudes are changing.”

The Impact and Strategic Implications of Voice Technologies

Another platform that is changing the landscape of online retail is the smart speaker. In the six months leading up to last year’s holiday shopping season, the popularity of the two major voice-enabled devices — Amazon Echo and Google Home — grew substantially, said Alice Fournier, vice president of digital and e-commerce insights for Kantar Consulting.

Nearly one in five of American households owned a smart speaker as of December 2017. Among shoppers who owned a device, 63 percent had an Amazon Echo and 15 percent owned a Google Home. Owners of both the Amazon Echo and Google Home tend to skew younger, have higher income, and are more likely to have children. Among consumers who have purchased either device, at least 35 percent earned $100,000 or more, according to a 2017 study, Fournier said.

The demographics of consumers who own a smart speaker also align with their shopping profiles. Macy’s shoppers have the highest percentage of smart speaker ownership: 32 percent have an Amazon Echo and 17 percent have a Google Home. At the bottom of the scale are Walmart shoppers: 15 percent have an Amazon Echo and 7 percent have a Google Home, according to a Kantar Consulting study Fournier presented.

Nevertheless, shopping is not the main activity consumers are leveraging on their voice-enabled devices, Fournier said. During the 2017 holiday season, the largest percentage of consumers (51 percent) listened to holiday music on their smart speakers. The number two activity was asking to hear holiday-themed jokes or stories (19 percent), and in third place was shopping for holiday gifts (15 percent).

“Shopping on these devices hasn’t yet picked up,” Fournier said, “but those consumers who shop on them have actually found it to be very easy and super convenient, and they have become such an integral part of American households that even children interact with them in multiple ways.”

“When someone is showing that he’s not willing to invest time in searching and is about to make an impulse un-researched purchase, Alexa can capture that shopping moment,” Liaukonyte said. “Amazon can potentially have Alexa strategically recommend products with higher margins, weighted by relevance.”

The next steps for Amazon in voice-enabled technology is integrating Alexa into the hospitality market, Fournier said. Last June, Amazon began providing the Echo in hotel rooms at select properties owned by Marriott Hotels.

“This to me is the new frontier — Alexa for hospitality — where now Alexa is in your hotel room,” Fournier added. “If you walk into your hotel room, what’s the amount of privacy you should have? It’s a question we didn’t ever think we would get to, but we are there.”

Beyond the Human-Robot Interaction

One aspect of digital technology that researchers are starting to explore is how these systems affect human interaction. The Amazon Echo, for example, can potentially change the way people communicate with other family members, says Malte Jung, assistant professor of Information Science and director of the Robots in Groups Lab at Cornell.

“Systems like Alexa work easiest if you use very simple language,” Jung said. “The speech recognition system works best if I say something like, ‘Alexa, order x,’ or ‘Alexa, play this song.’ Adults know that if I use that kind of language, the system understands me.”

Children, however, can pick up on that language and start using it to communicate with others by making similar types of demands, Jung said. That type of speech pattern, however, becomes inappropriate when children speak with others, and the problem is further compounded because children don’t make a distinction in whom they are talking to — whether it’s Alexa or a human being, Jung said.

Furthermore, introducing Alexa into homes can create unwanted intrusions into family conversations from the device. Yet in other environments such as workplaces, schools and hospitals, computers have been viewed more positively. Jung pointed to the da Vinci surgical system, which enables a surgeon to perform operations using a

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robotic arm. Despite the advances it has enabled in surgery, however, the da Vinci system has also altered communication patterns among surgical team members because the surgeon sits separately from the rest of the team at a console.

On the other hand, robots can have a positive effect on group dynamics with children by helping them develop conflict management skills, Jung said. In an experiment with children that simulated a conflict with toys, a robot helped work out the problem by following an adaptation of a standard conflict mediation technique. When the robot intervened, 67 percent of the children’s conflicts were constructively resolved, while in a control group that did not use the robot, only 18 percent were constructively resolved.

“This gave us some initial evidence that we can design machines to have positive social impact on how people interact,” Jung said. While the machines positively influenced the children’s behavior, Jung said he doubted the technique would work on a long-term basis because the children would realize that they could ignore the robot’s instructions.

Jung’s research also suggests that people are negatively impacted when a robot distributes resources unfairly to people working on a team. An experiment his lab conducted shows that a simple gesture of a robot — in this case, giving more blocks to a particular team member — can change the interaction the participants have with each other.

“For me the question when we design these systems, whether it’s intelligent algorithms that decide what price to give or how we design the smart speaker or any robot that comes into the home, is how do we think about the impact — beyond the interaction with the system — that it has on how people interact with each other,” Jung said.

Solutions for Industry and Next Steps

During the final session of the roundtable, participants were divided into three smaller groups to discuss three topics that constitute key challenges for online retailers: impulse buying, personalization of online shopping, and privacy and control of data.

Impulse Buying

While shopping online has shown steady growth, impulse buying on e-commerce channels is declining. The percentage of shoppers stocking up on products online increased to 38 percent this year, but impulse buying online dropped to 14 percent, Fournier said.

How to motivate online consumers to impulse shop is an obstacle that has not been resolved and needs further research, roundtable participants said.

“The big barrier to impulse shopping online is that you have such a limited ability to put something in somebody’s way, and even if you do put it where they weren’t asking for it, it’s not in a format that’s going to attract them,” said David Just, the Susan Eckert Lynch Professor of Science and Business in the Charles H. Dyson School of Applied Economics and Management and Director of IBEC at Cornell.

Just pointed to behavioral studies that show when a chocolate bar is placed behind a piece of plexiglass, people’s ability to resist the candy increases significantly. He suggested that a different type of impulse is needed to motivate shoppers online.

One way to motivate impulse shopping is to offer free samples of products as an incentive for making a purchase online. Retailers could also use the strategy of predictive replenishment — suggesting that online consumers buy another tube of toothpaste, for example, if they bought one several months ago.

In addition, marketers could spur impulse shopping by suggesting products that pair with food items the consumer has selected, such as promoting salsa as an accompaniment with tortilla chips. Roundtable participants said that if brands give online shoppers a locus of control, then they don’t feel “sold” by the intrusion of pop-up ads.

As e-commerce continues to evolve, roundtable participants agreed that the challenges the industry faces in the multi-channel arena need further discussion, particularly the issue of protecting consumer privacy.

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Personalization of Online Shopping

Email marketing is one of the most effective strategies in targeting customers with ads for specific products or services. Rosie, a technology provider that partners with independent grocers to offer e-commerce, has found that when it sends promotional emails to targeted groups of customers, 16 percent will proceed online to place an order, said Alyssa Nappa, head of retail marketing at Rosie.

Another strategy food retailers could use is to suggest recipes to consumers based on their online purchases. With the growing interest in the locavore movement, retailers could ask local restaurants to offer a recipe if the consumer purchased one ingredient as part of a meal, said Rod Hawkes, senior extension associate at the Charles H. Dyson School of Applied Economics and Management.

Because many consumers view online ads as intrusive, advertisers need to ensure that personalized promotions add meaning to the consumer experience. Companies need to move from segment marketing to individual marketing and avoid advertising products to consumers solely based on their demographics, interests, or previous shopping habits, Sarelson added.

Roundtable participants also indicated research is needed to determine when personalization crosses the threshold of acceptable practices and violates consumers’ personal, ethical, or religious principles.

Privacy and Control of Data

Roundtable participants agreed that online marketing companies need to make it easier for consumers to opt out of platforms that are harvesting their data. Many consumers are not aware that they can remove their online information from marketing companies’ databases or what the process is to accomplish that.

Consumers should also be able to adjust their online profile so that they only receive ads for products and service that are of interest, Sarelson said. Further research is needed to determine whether consumers would change their digital profile if given the opportunity, and whether receiving a financial incentive would increase their willingness to update their online data.

Future Steps for IBECC

As e-commerce continues to evolve, roundtable participants agreed that the challenges the industry faces in the multi-channel arena need further discussion, particularly the issue of protecting consumer privacy. The concerns over harvesting consumer data and how to regulate its use, is just one of the potential areas of research that IBECC and its behavioral science experts could explore at future roundtables.

At the same time, IBECC is also exploring opportunities that will allow the institute to engage with industry partners on collaborative research projects. This applied research will allow IBECC to fulfill its mission of nudging consumers towards smarter, healthier and more sustainable choices while helping companies make smarter and more profitable decisions based on the tools of behavioral science.
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Special Thanks to:

Karen Osborn, Chinda Sam and Liam Wickes-Do (IBECC Support Team – Cornell University), Sherrie Negrea (Versatile Writing), Valerie Mc Millen (Graphic Design) and Karen Mc Cheyne (Administrative Support- Cornell University).