The Dark Side of Customer Analytics

An insurance company finds some intriguing patterns in the loyalty card data it bought from a grocery chain – the correlation between condom sales and HIV-related claims, for instance. How can both companies leverage the data responsibly?

by Thomas H. Davenport and Jeanne G. Harris

Laura Brickman was glad she was almost done grocery shopping. The lines at the local ShopSense supermarket were especially long for a Tuesday evening. Her cart was nearly overflowing in preparation for several days away from her family, and she still had packing to do at home. Just a few more items to go: “A dozen eggs, a half gallon of orange juice, and—a box of Dip & Dunk cereal?” Her six-year-old daughter, Maryellen, had obviously used the step stool to get at the list on the counter and had scrawled her high-fructose demand at the bottom of the paper in bright-orange marker.
Laura made a mental note to speak with Miss Maryellen about what sugary cereals do to kids’ teeth (and to their parents’ wallets). Taking care not to crack any of the eggs, she squeezed the remaining items into the cart. She wheeled past the ShopSense Summer Fun displays. “Do we need more sunscreen?” Laura wondered for a moment, before deciding to go without. She got to the checkout area and waited.

As regional manager for West Coast operations of IFA, one of the largest sellers of life and health insurance in the United States, Laura normally might not have paid much attention to ShopSense’s checkout procedures – except maybe to monitor how accurately her purchases were being rung up. But now that her company’s fate was intertwined with that of the Dallas-based national grocery chain, she had less motivation to peruse the magazine racks and more incentive to evaluate the scanning and tallying going on ahead of her.

Some 14 months earlier, IFA and ShopSense had joined forces in an intriguing venture. Laura for years had been interested in the idea of looking beyond the traditional sources of customer data that insurers typically used to set their premiums and develop their products. She’d read every article, book, and Web site she could find on customers’ most recent purchases were being printed on receipts in a few of the test markets with what it called GoodSense messages – bits of useful health information printed on the backs of receipts, based partly on customers’ current and previous buying patterns. Nutritional analyses of some customers’ most recent purchases were being printed on receipts in a few of the test markets as well.

Shortly after reading that article, Laura had invited Steve to her office in San Francisco. The two met several times, and, after some fevered discussions with her bosses in Ohio, Laura made the ShopSense executive an offer. The insurer wanted to buy a small sample of the grocer’s customer loyalty card data to determine its quality and reliability; IFA wanted to find out if the ShopSense information would be meaningful when stacked up against its own claims information.

With top management’s blessing, Steve and his team had agreed to provide IFA with ten years’ worth of loyalty card data for customers in southern Michigan, where ShopSense had a high share of wallet – that is, the supermarkets weren’t located within five miles of a “club” store or other major rival. Several months after receiving the tapes, analysts at IFA ended up finding some fairly strong correlations between purchases of unhealthy products (high-sodium, high-cholesterol foods) and medical claims. In response, Laura and her actuarial and sales teams conceived an offering called Smart Choice, a low-premium insurance plan aimed at IFA customers who didn’t indulge.

Laura was flying the next day to IFA’s headquarters in Cincinnati to meet with members of the senior team. She would be seeking their approval to buy more of the ShopSense data; she wanted to continue mining the information and refining IFA’s pricing and marketing efforts. Laura understood it might be a tough sell. After all, her industry wasn’t exactly known for embracing radical change – even with proof in hand that change could work. The make-or-break issue, she thought, would be the reliability and richness of the data.

“Your CEO needs to hear only one thing,” Steve had told her several days earlier, while they were comparing notes. “Exclusive rights to our data will give you information that your competitors won’t be able to match. No one else has the historical data we have.”

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many customers nationwide.” He was right, of course. Laura also knew that if IFA decided not to buy the grocer’s data, some other insurer would.

“Paper or plastic?” a young boy was asking. Laura had finally made it to front of the line. “Oh, paper, please,” she replied. The cashier scanned in the groceries and waited while Laura swiped her card and signed the touch screen. Once the register printer had stopped chattering, the cashier curled the long strip of paper into a thick wad and handed it to Laura. “Have a nice night,” she said mechanically.

Before wheeling her cart out of the store into the slightly cool evening, Laura briefly checked the total on the receipt and the information on the back: coupons for sunblock and a reminder about the importance of UVA and UVB protection.

Tell It to Your Analyst

“No data set is perfect, but based on what we’ve seen already, the ShopSense info could be a pretty rich source of insight for us,” Archie Stetter told the handful of executives seated around a table in one of IFA’s recently renovated conference rooms. Laura nodded in agreement, silently cheering on the insurance company’s uberanalyst. Archie had been invaluable in guiding the pilot project. Laura had flown in two days ahead of the meeting and had sat down with the chatty statistics expert and some members of his team, going over results and gauging their support for continuing the relationship with ShopSense.

“Trans fats and heart disease—no surprise there, I guess,” Archie said, using a laser pointer to direct the managers’ attention to a PowerPoint slide projected on the wall. “How about this, though: Households that purchase both bananas and cashews at least quarterly seem to show only a negligible risk of developing Parkinson’s and MS.” Archie had at first been skeptical about the quality of the grocery chain’s data, but ShopSense’s well of information was deeper than he’d imagined. Frankly, he’d been having a blast slicing and dicing. Enjoying his moment in the spotlight, Archie went on a bit longer than
he’d intended, talking about typical patterns in the purchase of certain over-the-counter medications, potential leading indicators for diabetes, and other statistical curiosities. Laura noted that as Archie’s presentation wore on, CEO Jason Walter was jotting down notes. O.Z. Cooper, IFA’s general counsel, began to clear his throat over the speakerphone.

Laura was about to rein in her stats guy when Rusty Ware, IFA’s chief actuary, addressed the group. “You know, this deal isn’t really as much of a stretch as you might think.” He pointed out that the company had for years been buying from information brokers lists of customers who purchased specific drugs and products. And IFA was among the best in the industry at evaluating external sources of data (credit histories, demographic studies, analyses of socioeconomic status, and so on) to predict depression, back pain, and other expensive chronic conditions. Prospective IFA customers were required to disclose existing medical conditions and information about their personal habits – drinking, smoking, and other high-risk activities – the actuary reminded the group.

The CEO, meanwhile, felt that Rusty was overlooking an important point. “But if we’re finding patterns where our rivals aren’t even looking, if we’re coming up with proprietary health indicators – well, that would be a huge hurdle for everyone else to get over,” Jason noted.

Laura was keeping an eye on the clock; there were several themes she still wanted to hammer on. Before she could follow up on Jason’s comments, though, Geneva Hendrickson, IFA’s senior vice president for ethics and corporate responsibility, posed a blue-sky question to the group: “Take the fruit-and-nut stat Archie cited. Wouldn’t we have to share that kind of information? As a benefit to society?”

Several managers at the table began talking over one another in an attempt to respond. “Correlations, no matter how interesting, aren’t conclusive evidence of causality,” someone said. “Even if a correlation doesn’t hold up in the medical community, that doesn’t mean it’s not useful to us,” someone else suggested.

Laura saw her opening; she wanted to get back to Jason’s point about competitive advantage. “Look at Progressive Insurance,” she began. It was able to steal a march on its rivals simply by recognizing that not all motorcycle owners are created equal. Some ride hard (young bikers), and some hardly ride (older, middle-class, midlife crisis riders). “By putting these guys into different risk pools, Progressive has gotten the rates right,” she said. “It wins all the business with the safe set by offering low premiums, and it doesn’t lose its shirt on the more dangerous set.”

Then O.Z. Cooper broke in over the speakerphone. Maybe the company should formally position Smart Choice and other products and marketing programs developed using the ShopSense data as opt in, he wondered. A lot of people signed up when Progressive gave discounts to customers who agreed to put devices in their cars that would monitor their driving habits. “Of course, those customers realized later they might pay a higher premium when the company found out they routinely exceeded the speed limit – but that’s not a legal problem,” O.Z. noted. None of the states that IFA did business in had laws prohibiting the sort of data exchange ShopSense and the insurer were proposing. It would be a different story, however, if the company wanted to do more business overseas.

At that point, Archie begged to show the group one more slide: sales of prophylactics versus HIV-related claims. The executives continued taking notes. Laura glanced again at the clock. No one seemed to care that they were going a little over.

Data Decorum

Rain was in the forecast that afternoon for Dallas, so Steve Worthington decided to drive rather than ride his bike the nine and a half miles from his home to ShopSense’s corporate offices in the Hightower Complex. Of course, the gridlock made him a few minutes late for the early morning meeting with ShopSense’s executive team. Lucky for him, others had been held up by the traffic as well.

The group gradually came together in a slightly cluttered room off the main hallway on the 18th floor. One corner of the space was being used to store prototypes of regional in-store displays featuring several members of the Houston Astros’ pitching staff. “I don’t know whether to grab a cup of coffee or a bat,” Steve joked to the others, gesturing at the life-size cardboard cutouts and settling into his seat.

Steve was hoping to persuade CEO Donna Greer and other members of the senior team to approve the terms of the data sale to IFA. He was pretty confident he had majority support; he had already spoken individually with many of the top executives. In those one-on-one conversations, only Alan Atkins, the grocery chain’s chief operations officer, had raised any significant issues, and Steve had dealt patiently with each of them. Or so he thought.

At the start of the meeting, Alan admitted he still had some concerns about selling data to IFA at all. Mainly, he was worried that all the hard work the organization had done building up its loyalty program, honing its analytical chops, and maintaining deep customer relationships could be undone in one fell swoop. “Customers find out, they stop using their cards, and we stop get-
Steve reminded Alan that IFA had no interest in revealing its relationship with the grocer to customers. There was always the chance an employee would let something slip, but even if that happened, Steve doubted anyone would be shocked. “I haven’t heard of anybody canceling based on any of our other card-driven marketing programs,” he said.

“That’s because what we’re doing isn’t visible to our customers—or at least it wasn’t until your recent comments in the press,” Alan grumbled. There had been some tension within the group about Steve’s contribution to several widely disseminated articles about ShopSense’s embrace of customer analytics.

“Point taken,” Steve replied, although he knew that Alan was aware of how much positive attention those articles had garnered for the company. Many of its card-driven marketing programs had since been deemed cutting-edge by others in and outside the industry. Steve had hoped to move on to the financial benefits of the arrangement, but Denise Baldwin, ShopSense’s head of human resources, still seemed concerned about how IFA would use the data. Specifically, she wondered, would it identify individual consumers as employees of particular companies? She reminded the group that some big insurers had gotten into serious trouble because of their profiling practices.

IFA had been looking at this relationship only in the context of individual insurance customers, Steve explained, not of group plans. “Besides, it’s not like we’d be directly drawing the risk pools,” he said. Then Steve began distributing copies of the spreadsheets outlining the five-year returns ShopSense could realize from the deal.

“What if IFA took the pilot to the next level and found out something that maybe it was better off not knowing?” Donna Greer gently twirled the stemware against her husband’s. The two were attending a wine tasting hosted by a friend. The focus was on varieties from Chile and other Latin American countries, and Donna and Peter had yet to find a sample they didn’t like. But despite the lively patter of the event and the plentiful food, Donna couldn’t keep her mind off the IFA deal. “The big question is, Should we be charging more?” she mused to her husband. ShopSense was already selling its scanner data to syndicators, and, as her CFO had reminded her, the company currently made more money from selling information than from selling meat. Going forward, all ShopSense would have to do was send IFA some tapes each month and collect a million dollars annually of pure profit. Still, the deal wasn’t without risks: By selling the information to IFA, it might end up diluting or destroying valuable and hard-won customer relationships. Donna could see the headline now: “Big Brother in Aisle Four.” All the more reason to make it worth our while, she thought to herself.

“Isn’t that the whole point of insurance?” Peter urged Donna to drop the issue for a bit, as he scribbled his comments about the wine they’d just sampled on a rating sheet. “But I’ll go on record as being against the whole thing,” he said. “Some poor soul puts potato chips in the cart instead of celery, and look what happens.”

“But what about the poor soul who buys the celery and still has to pay a fortune for medical coverage,” Donna argued, “because the premiums are set based on the people who can’t eat just one?”

“Isn’t that the whole point of insurance?” Peter teased. The CEO shot her husband a playfully peeved look—and reminded herself to send an e-mail to Steve when they got home.

How can these companies leverage the customer data responsibly? Four commentators offer expert advice.

“Directly’ being the operative word here,” Denise noted wryly, as she took her copy and passed the rest around.

Parsing the Information

It was 6:50 PM, and Jason Walters had canceled his session with his personal trainer—again—to stay late at the office. Sammy will understand, the CEO told himself as he sank deeper into the love seat in his office, a yellow legal pad on his lap and a pen and cup of espresso balanced on the arm of the couch. It was several days after the review of the ShopSense pilot, and Jason was still weighing the risks and benefits of taking this business relationship to the next stage.

He hated to admit how giddy he was—almost as gleeful as Archie Stetter had been—about the number of meaningful correlations the analysts had turned up. “Imagine what that guy could do with an even larger data set,” O.Z. Cooper had commented to Jason after the meeting. Exclusive access to ShopSense’s data would give IFA a leg up on competitors, Jason knew. It could also provide the insurer with proprietary insights into the food-related drivers of disease. The deal was certainly legal. And even in the court of public opinion, people understood that insurers had to perform risk analyses. It wasn’t the same as when that online bookseller got into trouble for charging customers differently based on their shopping histories.

But Jason also saw dark clouds on the horizon: What if IFA took the pilot to the next level and found out something that maybe it was better off not knowing? As he watched the minute hand sweep on his wall clock, Jason wondered what risks he might be taking without even realizing it.
SURE, A CUSTOMER database has value, and a company can maximize that value in any number of ways – growing the database, mining it, monetizing it. Marketers can be tempted, despite pledges about privacy, to use collected information in ways that seem attractive but may ultimately damage relationships with customers.

The arrangement proposed in this case study seems shortsighted to me. Neither company seems to particularly care about its customers. Instead, the message coming from the senior teams at both IFA and ShopSense is that any marketing opportunity is valid—as long as they can get away with it legally and customers don’t figure out what they’re doing.

In my company, this pilot would never have gotten off the ground. The culture at Borders is such that the managers involved would have just assumed we wouldn’t do something like that. Like most successful retail companies, our organization is customer focused; we’re always trying to see a store or an offer or a transaction through the customer’s eyes. It was the same way at both Saks and Target when I was with those companies.

At Borders, we’ve built up a significant database through our Borders Rewards program, which in the past year and a half has grown to 17 million members. The data we’re getting are hugely important as a basis for serving customers more effectively (based on their purchase patterns) and as a source of competitive advantage. For instance, we know that if somebody buys a travel guide to France, that person might also be interested in reading Peter Mayle’s *A Year in Provence*. But we assure our customers up front that their information will be handled with the utmost respect. We carefully control the content and frequency of even our own communications with Rewards members. We don’t want any offers we present to have negative connotations – for instance, we avoid bombarding people with e-mails about a product they may have absolutely no interest in.

I honestly don’t think these companies have hit upon a responsible formula for mining and sharing customer data. If ShopSense retained control of its data to some degree—that is, if the grocer and IFA marketed the Smart Choice program jointly, and if any offers came from ShopSense (the partner the customer has built up trust with) rather than the insurance company (a stranger, so to speak)—the relationship could work. Instead of ceding complete control to IFA, ShopSense could be somewhat selective and send offers to all, some, or none of its loyalty card members, depending on how relevant the grocer believed the insurance offer would be to a particular set of customers.

A big hole in these data, though, is that people buy food for others besides themselves. I rarely eat at home, but I still buy tons of groceries—some healthy, some not so healthy—for my kids and their friends. If you looked at a breakdown of purchases for my household, you’d say “Wow, they’re consuming a lot.” But the truth is, I hardly ever eat a bite. That may be an extreme example, but it suggests that IFA’s correlations may be flawed.

Both CEOs are subjecting their organizations to a possible public relations backlash, and not just from the ShopSense customers whose data have been dealt away to IFA. Every ShopSense customer who hears about the deal, loyalty card member or not, is going to lose trust in the company. IFA’s customers might also think twice about their relationship with the insurer. And what about the employees in each company who may be uncomfortable with what the companies are trying to pull off? The corporate cultures suffer.

What the companies are proposing here is very dangerous—especially in the world of retail, where loyalty is so hard to win. Customers’ information needs to be protected.
As the case study illustrates, companies will soon be able to create fairly exhaustive, highly accurate profiles of customers without having had any direct interaction with them. They’ll be able to get to know you intimately without your knowledge.

From the consumer’s perspective, this trend raises several big concerns. In this fictional account, for instance, a shopper’s grocery purchases may directly influence the availability or price of her life or health insurance products—and not necessarily in a good way. Although the customer, at least tacitly, consented to the collection, use, and transfer of her purchase data, the real issue here is the unintended and uncontemplated use of the information (from the customer’s point of view). Most customers would probably be quite surprised to learn that their personal information could be used by companies in a wholly unrelated industry and in other ways that aren’t readily foreseeable.

If consumers lose trust in firms that collect, analyze, and utilize their information, they will opt out of loyalty and other data-driven marketing programs, and we may see more regulations and limitations on data collection. Customer analytics are effective precisely because firms do not violate customer trust. People believe that retail and other organizations will use their data wisely to enhance their experiences, not to harm them. Angry customers will certainly speak with their wallets if that trust is violated.

Decisions that might be made on the basis of the shared data represent another hazard for consumers—and for organizations. Take the insurance company’s use of the grocer’s loyalty card data. This is limited information at best and inaccurate at worst. The ShopSense data reflect food bought but not necessarily consumed, and individuals buy food at many stores, not just one. IFA might end up drawing erroneous conclusions—and exacting unfair rate increases. The insurer’s general counsel should investigate this deal.

Another concern for consumers is what I call “battered customer syndrome.” Market analytics allow companies to identify their best and worst customers and, consequently, to pay special attention to those deemed to be the most valuable. Looked at another way, analytics enable firms to understand how poorly they can treat individual or groups of customers before those people stop doing business with them. Unless you are in the top echelon of customers—those with the highest lifetime value, say—you may pay higher prices, get fewer special offers, or receive less service than other consumers. Despite the fact that alienating 75% to 90% of customers may not be the best idea in the long run, many retailers have adopted this “top tier” approach to managing customer relationships. And many customers seem to be willing to live with it—perhaps with the unrealistic hope that they may reach the upper echelon and reap the ensuing benefits.

Little research has been done on the negative consequences of using marketing approaches that discriminate against customer segments. Inevitably, however, customers will become savvier about analytics. They may become less tolerant and take their business (and information) elsewhere.

If access to and use of customer data are to remain viable, organizations must come up with ways to address customers’ concerns about privacy. What, then, should IFA and ShopSense do? First and foremost, they need to let customers opt in to their data-sharing arrangement. This would address the “unintended use of data” problem; customers would understand exactly what was being done with their information. Even better, both firms would be engaging in trust-building—versus trust-eroding—activities with customers. The result: improvement in the bottom line and in the customer experience.

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TRANSPARENCY IS A critical component of any loyalty card program. The value proposition must be clear; customers must know what they’ll get for allowing their purchase behavior to be monitored. So the question for the CEOs of ShopSense and IFA is, Would customers feel comfortable with the data-sharing arrangement if they knew about it?

ShopSense’s loyalty card data are at the center of this venture, but the grocer’s goal here is not to increase customer loyalty. The value of its relationship with IFA is solely financial. The company should explore whether there are some customer data it should exclude from the transfer—information that could be perceived as exceedingly sensitive, such as pharmacy and alcohol purchases. It should also consider doing market research and risk modeling to evaluate customers’ potential reaction to the data sharing and the possible downstream effect of the deal.

The risk of consumer backlash is lower for IFA than for ShopSense, given the information the insurance company already purchases. IFA could even put a positive spin on the creation of new insurance products based on the ShopSense data. For instance, so-called healthy purchases might earn customers a discount on their standard insurance policies. The challenge for the insurer, however, is that there is no proven correlation between the purchase of certain foods and fewer health problems. IFA should continue experimenting with the data to determine their richness and predictive value.

Some companies have more leeway than others to sell or trade customer lists. At Harrah’s, we have less than most because our customers may not want others to know about their gaming and leisure activities. We don’t sell information, and we don’t buy a lot of external data. Occasionally, we’ll buy demographic data to fine-tune our marketing messages (to some customers, an offer of tickets to a live performance might be more interesting than a dining discount, for example). But we think the internal transactional data are much more important.

We do rely on analytics and models to help us understand existing customers and to encourage them to stick with us. About ten years ago, we created our Total Rewards program. Guests at our hotels and casinos register for a loyalty card by sharing the information on their driver’s license, such as their name, address, and date of birth. Each time they visit one of our 39 properties and use their card, they earn credits that can be used for food and merchandise. They also earn Tier Credits that give them higher status in the program and make them eligible for differentiated service.

With every visit, we get a read on our customers’ preferences—the types of games they play, the hotels and amenities they favor, and so on. Those details are stored in a central database. The company sets rules for what can be done with the information. For instance, managers at any one of our properties can execute their own marketing lists and programs, but they can target only customers who have visited their properties. If they want to dip into the overall customer base, they have to go through the central relationship-marketing group. Some of the information captured in our online joint promotions is accessible to both Harrah’s and its business partners, but the promotions are clearly positioned as opt in.

We tell customers the value proposition up front: Let us track your play at our properties, and we can help you enjoy the experience better with richer rewards and improved service. They understand exactly what we’re capturing, the rewards they’ll get, and what the company will do with the information. It’s a win-win for the company and for the customer.

Companies engaging in customer analytics and related marketing initiatives need to keep “win-win” in mind when collecting and handling customer data. It’s not just about what the information can do for you; it’s about what you can do for the customer with the information.
COMPANIES THAT CAN CAPITALIZE on the information they get from their customers hold an advantage over rivals. But as the firms in the case study are realizing, there are also plenty of risks involved with using these data. Instead of pulling back the reins, organizations should be nudging customer analytics forward, keeping in mind one critical point: Any collection, analysis, and sharing of data must be conducted in a protected, permission-based environment.

Humana provides health benefit plans and related health services to more than 11 million members nationwide. We use proprietary data-mining and analytical capabilities to help guide consumers through the health maze. Like IFA, we ask our customers to share their personal and medical histories with us (the risky behaviors as well as the good habits) so we can acquaint them with programs and preventive services geared to their health status. Customer data come to us in many different ways. For instance, we offer complimentary health assessments in which plan members can take an interactive online survey designed to measure how well they’re taking care of themselves. We then suggest ways they can reduce their health risks or treat their existing conditions more effectively. We closely monitor our claims information and use it to reach out to people. In our Personal Nurse program, for example, we’ll have a registered nurse follow up with a member who has filed, say, a diabetes-related claim. Through phone conversations and e-mails, the RN can help the plan member institute changes to improve his or her quality of life. All our programs require members to opt in if the data are going to be used in any way that would single a person out. Regardless of your industry, you have to start with that.

One of the biggest problems in U.S. health care today is obesity. So would it be useful for our company to look at grocery-purchasing patterns, as the insurance company in the case study does? It might be. I could see the upside of using a grocer’s loyalty card data to develop a wellness-based incentive program for insurance customers. (We would try to find a way to build positives into it, however, so customers would look at the interchange and say “That’s in my best interest; thank you.”)

But Humana certainly wouldn’t enter into any kind of data-transfer arrangement without ensuring that our customers’ personal information and the integrity of our relationship with them would be properly protected. In health care, especially, this has to be the chief concern—above and beyond any patterns that might be revealed and the sort of competitive edge they might provide. We use a range of industry standard security measures, including encryption and firewalls, to protect our members’ privacy and medical information.

Ethical behavior starts with the CEO, but it clearly can’t be managed by just one person. It’s important that everyone be reminded often about the principles and values that guide the organization. When business opportunities come along, they’ll be screened according to those standards—and the decisions will land right side up every time. I can’t tell people how to run their meetings or who should be at the table when the tougher, gray-area decisions need to be made, but whoever is there has to have those core principles and values in mind.

When the tougher, gray-area decisions need to be made, each person has to have the company’s core principles and values in mind.

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