tyco

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building your
defenses against
organized retail crime

Introduction

Shoplifting is a persistent challenge for retailers trying balance a pleasant shopping environment against a drain on their merchandise, profits, and patience. According to the 2010 National Retail Security Survey (NRSS), total inventory shrinkage has shown modest declines over two decades[1] (probably due to better inventory controls) but losses remain unacceptably high. US shrink measured $35.28 billion, or 1.49% of 2010 retail sales[2] — more than auto theft, burglary, larceny, and robbery combined. Worldwide, shrink accounts for more than $107 billion.[3]

Shoplifting accounts for 31% of investigated US cases of shrinkage—even more for high-risk categories like off-price outlets and apparel stores.[4] And although recordkeeping differences complicate direct comparisons, indications are strong that shoplifting is an even greater problem in European and Asia-Pacific markets[5], where cross-border gangs steal high-end merchandise, then quickly leave the country to avoid prosecution.[6,7]

A growing proportion of shoplifting losses stem from a disturbing new source: 25% of investigated US shoplifting cases are due to organized criminal gangs. The rise of Organized Retail Crime (ORC) raises the stakes in retailers' constant struggle to control losses without alienating honest shoppers, and it demands new strategies and technologies to protect retail merchandise, profits, employees, and customers.

Organized Retail Crime

Organized Retail Crime refers to groups of people who illegally obtain merchandise in substantial quantities through theft and fraud for the purpose of resale.[8] It is typically a two-stage process: theft of the merchandise, followed by monetization of the stolen goods, including related financial crimes such as credit- and gift-card fraud, return fraud, and smuggling. It is distinct from employee fraud (although collusion is common), merchandise counterfeiting, after-hours "smash and grab" theft, and theft by habitual local offenders, ORC is a source of increasing concern in the retail community. Almost all retailers—94.5%—report that they have been victims, and 84.8% report increased incidents over the past three years.[9] Retailer reports put ORC losses at an average $6,842 per instance compared with $438 for shoplifting incidents in 2009[10], so the financial impact of ORC is much greater than incident percentages indicate. And because thieves steal in bulk and concentrate on categories that are easy to resell, indirect losses include inventory turns on popular items no longer available for sale, and "frozen out-of-stock" conditions when shelves have been picked clean of a popular style or size. Frozen out-of-stock conditions are corrected only after the next physical inventory, reorder, and shipping cycle. So assuming a six-month

1. Richard Hollinger, Ph.D. and Amanda Adams, M.A. 2010 National Retail Security Survey. (Gainesville, FL: University of Florida. 2011).
2. Hollinger and Adams, 2010 National Retail Security Survey.
3. Bamfield, J. The Global Retail Threat Barometer 2010: Key Findings. (Nottingham: Centre for Retail Research, 2010). http://www.retailresearch.org/grtb_globaltrends.php
4. Hollinger and Adams, 2010 National Retail Security Survey.
5. Bamfield, Global Retail Threat Barometer.
6. Detailhandel Nederland. Itinerant groups target stores in European Union: An urgent cross-border problem. (Leidschendam, NL. November, 2009).
7. Mavis Toh and The Joo Lin. "Big-time shopper who's just a credit-card cheat", The Straits Times. (Singapore: Singapore Press Holdings Ltd. Co. May 7, 2011).
8. "Organized Retail Crime: Scope, Solutions", Retail Solutions Online. (Horsham, PA: VertMarkets. April 23, 2009). http://www.retailsolutionsonline.com/article.mvc/Organized-Retail-Crime-Scope-Solutions-0001
9. Phil Wahba (Reuters). "More retailers hit by organized crime: survey." The Orlando Sentinel. (Orlando, FL. June 8, 2011).
10. Richard Hollinger, Ph.D. and Amanda Adams, M.A. 2009 National Retail Security Survey: Final Report.

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physical inventory cycle, they keep a store's most popular items from being replenished in the right quantities for more than a quarter of a year—resulting in lost sales opportunity. The scale of the ORC problem is significant. The most recent FBI study, in 2005, estimated direct US economic losses from ORC between $15 and $30 billion, and a more recent European Union study[11] of cross-border retail crime estimated losses there at €7.6 billion ($US 10.4 billion) from cross-border activity alone.

Contributing factors

Increased economic pressure on consumers has probably led to greater participation in organized shoplifting and tolerance of purchasing stolen merchandise. But more important are permanent structural changes in global retail markets:

- *New distribution channels* include online stores, distributors, and auction sites, which are far more efficient than the old networks of street vendors, flea markets, and other informal channels.
- *Multiple price points* advertised by online vendors dilute the pricing power of valid priced products and raise shoppers' expectations of a deal.
- *Cross-border mobility* of people supports theft by itinerant gangs throughout Europe, and in the US from Puerto Rico and Central America. And global shipping allows goods stolen in the US, for example, to be sold overseas, often at much higher prices.
- *Easy monetization*, through return fraud and gift cards that may be consolidated and sold online, raises thieves' returns: goods with a street value 30% of retail may be sold online for 70%, or returned and converted into gift cards at 100%.

Like retail theft itself, monetization activity resists direct measurement, but indirect data point to widespread abuse. Over one-quarter of surveyed retailers believe that more than 50% of "new in box" and "new with tags" merchandise sold online is stolen or fraudulently obtained[12] and fraudulent returns account for a $9.6 billion annual drain on US retailers' profits.[13]

The rising presence of both theft and monetization associated with Organized Retail Crime comes at a time when gang activity of all kinds is undiminished. Retail loss-prevention and security staff are being pared back in a soft economy and as smaller store footprints reduce revenue support for in-store Loss Prevention staff. Technology plays a role, too, especially mobile phones that offer Instant Messaging and "push-to-talk" features gangs use to coordinate their activities (see sidebar, "Organized Retail Crime: Gang Organization and Methods").

11. Detailhandel Nederland, Itinerant groups target stores in European Union.
12. National Retail Federation. 2010 Organized Retail Crime Survey. (Washington, DC. June, 2010).
13. National Retail Federation. Return Fraud Survey 2009. (Washington, DC. October, 2009).

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Organized Retail Crime:
Gang Organization and Methods

Organization

Segregation of roles is typical of retail gangs; for efficient deployment of specialized skills, and to provide "cut-outs" that limit the damage in case a team member is identified or apprehended. Most gangs are headed by a director who controls "business" interactions such as managing travel and shipping, handling the group's cash, and interacting with bail bond agencies. A second specialty is lookout or countersurveillance teams, responsible for reporting when the gang's activities, including those of the lookouts themselves, have drawn the attention of store security or law enforcement.

In-store "boosters" (who steal the merchandise) and "mules" (who take it out of the store) will exchange roles as needed to carry out a theft or avoid detection. Depending on the gang's experience and sophistication, they may:

- Prepare merchandise for theft, marking it with pennies or store flyers, removing Electronic Article Surveillance tags in fitting rooms.
- Conceal goods in fitting rooms or under-stock drawers for quick removal.
- Distract store employees by applying for store credit cards, calling the department and hanging up, or hiding a size or style of apparel and then requesting it.

Methods

Boosters steal merchandise using a dizzying variety of methods and tools:

- Booster bags, boxes, purses, baby strollers, laptop bags, etc. are lined with many layers of aluminum foil to defeat Electronic Article Surveillance (EAS) systems. Sophisticated gangs make sturdy custom bags, often with four handles, and disguise them as bags from a national brand with presence in the target mall.
- Booster clothing is a variation on this theme, and includes pants, dresses, over-coats, skirts, and girdles. Experienced security personnel look for shoppers overdressed for the weather, holding garments in front of them as they walk, and moving slowly.
- Tools include keys for display-cases and under-stock drawers, makeshift or stolen EAS removal tools (that may also be used as weapons), and even sophisticated EAS jamming devices, sold openly online as "demonstration devices", often for thousands of dollars.
- Alternate methods of theft include "box stuffing" of expensive merchandise into the emptied boxes of large, cheap items, and "ticket switching", covering or replacing barcode tags with tags stolen or copied from cheaper items.

Evasion and getaway

To conceal their theft, booster teams redistribute merchandise and take hangers along with garments. "Mules" take merchandise out of the store to a rental car parked in the lot.

"Drop" vehicles have stolen, obscured, or missing license plates. Keys are carried separately from the remote-locking fob so security and law-enforcement person-nel can't find the car just by walking through the lot. The focus of activity is the back seat, not the trunk. Merchandise is concealed there under motel blankets, why motel blankets? often by another gang member sitting in the rear seat with the car's engine off. Sometimes the rear seat is removed to make room for more merchandise.

Monetization

Organized Retail Crime gangs still use physical fencing through pawnshops, flea markets, and street corners, although e-fencing through auction sites and web pages has become much more common.

The gangs also monetize their take by exploiting store refund and gift-card policies. They use multiple methods to generate "cash" receipts. For example, many stores issue cash receipts for returned merchandise if the thief presents any amount of cash, for example to "buy" a slightly more expensive item. The thief then returns the "purchased" item, using the cash receipt for a cash refund, pocketing the full value of the original stolen item. They also return unreceipted items for gift cards that they consolidate into large denominations and sell online, for faster payout and better margins than they could get by fencing the merchandise.

Gangs' financial specialists seldom limit themselves to just one scam—creditcard and check fraud, often for gift cards, is common. And sophisticated gangs counterfeit receipts using stolen rolls of receipt stock and portable printers.

Comparison with local offenders

Organized retail criminal gangs are disciplined, focused, and use far more sophisticated methods than local habitual offenders, who often leave hangers and defeated EAS tags behind them. Local criminals also typically have records of multiple crimes involving theft and fraud—for which they are often on probation.

Defenses and countermeasures

Retailers have three general lines of defense against Organized Retail Crime. Extending and refining current store-by-store efforts is a good start, and offers excellent returns on comparatively modest investments. Deploying new technologies—often moderately priced upgrades to current Loss Prevention systems—can defeat booster bags and EAS jammers, forcing thieves to adopt riskier methods or choose safer targets. And long-lasting success against Organized Retail Crime will come only from organized response, across stores, regions, and chains, and with the assistance of law enforcement agencies and public policymakers. Let's review each approach:

Enhancing current approaches

Environment—Enhancing deterrence efforts offers the most immediate results, the greatest compatibility with current policies and training, and often the lowest costs. "We prosecute" signage, hard to peel off stickers with statements like "Sold only in XXX (retailer name)" placed on items, small changes in store layout to open sightlines in high-risk areas, and ORC-aware changes to fitting room policies and staffing also cut incident rates significantly. The visible presence of technologies like Electronic Article Surveillance and video surveillance also suppress both opportunistic and organized shoplifting.

Personnel—Visible, attentive Sales Associates are an excellent defense against ORC, but most have no idea what to look for. Training them in the behavior patterns of organized criminals often will return the time and wage investment many times over—and most retail organizations and law enforcement agencies are happy to help. Loss-prevention staff are better trained, so deterrence depends on their numbers, and deployment to high risk areas. "Loss Prevention Greeters" who make eye contact with people at the store entrance, monitor the exit, and flag suspect behavior are established methods of reducing shoplifting[14] , whether opportunistic, habitual, or organized. Loss-prevention specialists, for example investigators, offer more modest initial returns, but can improve enforcement and recovery in large-scale cases, and help build partnerships with other stores and law-enforcement agencies.

Antifraud measures—Policies that block or complicate monetization will have little effect on opportunistic or habitual local shoplifters who steal merchandise for their own use, but they strike at the heart of Organized Retail Crime. Stricter policies governing issuance of cash receipts can have a big impact: for example, simply marking "cash plus store credit" purchase receipts with the amount of cash involved blocks the most lucrative form of return fraud. And "this store only" returns policies at high-risk stores significantly impairs gift-card consolidation and online monetization.

14. Loss Prevention Retail Council Offender Interviewing Program. GreetereffectiveDam (video). (Gainesville, FL: University of Florida. August 15, 2011).

Detection—Expanding established Electronic Article Surveillance and video surveillance programs based on patterns of organized crime raises the risk of detection, making stores far less attractive targets. Tagging and monitoring denim apparel to deter a trickle of individual thefts may not be a priority, but it makes sense when thefts occur in bulk. Utilizing video surveillance to monitor suspicious or repeating ORC criminals and alerting store associates if a theft occurs provides another opportunity to raise the risk of detection.

Deploying new technologies

Extensions of Electronic Article Surveillance technologies specifically targeting Organized Retail Crime are now available; they include:

- Jammer detectors that respond to the signals thieves use to overwhelm the electronic resonances on which EAS detectors depend. Even though jammers are turned on for only a few seconds as a thief exits the store, a positive read from a jammer detector indicates an ORC event with virtual certainty.
- Booster-bag detectors detect aluminum-foil-lined containers as they are carried into the store.
- Selective remote alarms direct information from jammer detectors and booster-bag detectors to notify staff that a thief has entered the store. Systems may be programmed to sound a unique tone so staff can respond appropriately, or send a silent alert so that Security and Loss Prevention personnel can initiate surveillance.

In jurisdictions like the United Kingdom and Australia, carrying a jammer or booster bag is evidence of "going equipped to steal" — a crime in itself. And almost everywhere, detection of shoplifting equipment gives security staff or law enforcement justification to detain the individual so equipped — a powerful deterrent.

New applications of video surveillance are the next stage in the fight against shoplifting of all kinds, and Organized Retail Crime in particular:

- When jammer and booster-bag detectors are linked to digital video surveillance, stores will capture pictures of potential thieves entering and leaving the store — a powerful tool for both training and enforcement. And when item-level information from Radio-Frequency Identification (RFID) tags are integrated into Loss-Prevention[15] , stores can link video evidence of theft events to goods recovered from thieves at the storefront or in the parking lot.
- Advanced technologies now in the development pipeline will extend video surveillance to include facial recognition, monitoring of "exception behaviors" typical of gang theft, and storewide surveillance that follows likely thieves through the store.
- Pervasive video—already a factor in prosecuting crime in public areas—is on the retail horizon, with shelf-level cameras linked to advanced detectors to provide an end-to-end record of theft events, together with a way to filter out the activities of legitimate shoppers.

15. Cross-reference to companion Shrink Visibility paper [TBD in production phase]

Organized Retail Defense

The final step in the fight against Organized Retail Crime will come when retailers themselves organize, turning the gangs' most powerful method against them. This will take several forms:

Predictive analytics—integration of information from EAS, jammer, booster-bag, and RFID detectors, video surveillance, human intelligence and more can identify patterns of theft within and across stores, for efficient deployment of deterrents, countermeasures, and enforcement.

Date	Day	Hour	Alarms	Metal Detect Alarms	% of Alarms w/ Metal Foil Detection
03/28/2012	Wednesday	7:00	2	0	
03/28/2012	Wednesday	8:00	1	0	
03/28/2012	Wednesday	9:00	1	0	
03/28/2012	Wednesday	10:00	0	0	
03/28/2012	Wednesday	11:00	0	0	
03/28/2012	Wednesday	12:00	2	1	50.00%
03/28/2012	Wednesday	1:00	1	0	
03/28/2012	Wednesday	2:00	0	0	
03/28/2012	Wednesday	3:00	0	0	
03/28/2012	Wednesday	4:00	0	0	
03/28/2012	Wednesday	5:00	0	0	
03/28/2012	Wednesday	6:00	3	1	33.33%
03/28/2012	Wednesday	7:00	3	0	

Figure 1—from a report offered by Tyco, illustrates alarm events generated from organized retail criminals using metal foil booster bags.

Real-time adaptive analytics—monitoring Point-of-Sale (POS) data, store traffic, and real-time inventory lift from both sales and theft will help stores align associate staffing to patterns of shopper behavior, deploying them to maximize sales and minimize theft. The keys to success are to combine and interpret signals in real time with context, and adapt monitoring to changes in traffic and threat level.[16]

- Collaboration and enforcement—the retail industry, together with government and law-enforcement agencies, are beginning to organize against the regional and national problem presented by ORC. Collaboration can start as simply as lunches, training and data-sharing among retailers at a single mall, and extend through public-private partnerships such as LERPnet[17] all the way to national legislative initiatives and cross-border extradition agreements.

16. Hung LeHong. The Real-Time Store Monitoring Platform (Industry Research report). (Stamford,
17. CT: Gartner, Inc. August 26, 2009). National Retail Federation. 2010 Organized Retail Crime Survey.

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Conclusions

Organized Retail Crime is emerging as a significant threat to retailers worldwide. Its growing incidence and sophistication, the high costs for every incident, and advanced opportunities for monetization mark it as a global problem deserving immediate, sustained attention.

Extensions of current policies and technologies are helpful, but not enough: integration, adaptation, and information-sharing are the keys to a strategy that will reverse the trend. With targeted programs and investments, retailers can expect the direct benefits of loss reduction, and indirect benefits from more efficient, cost-effective staff deployment, improved deterrence and recovery, and ultimately, a better, safer shopping experience for their customers.

Tyco Retail Solutions offers a broad range of technology and software solutions to help retailers combat Organized Retail Crime, including
- Jammer Detection feature built into many detection systems, so retailers can detect and counteract attempts to defeat their Loss Prevention technologies
- Metal-Foil Detection upgrades for Ultra Exit detection system, so retailers can detect foil-lined booster bags carried into their stores
- Alarming High Theft Tags and Wraps omit loud audible alarms from the sensors themselves, so retailers can deter ORC shelf sweeping
- Shrink Visibility solutions combining AM and RFID technologies for insight into theft events and guidance for replenishment
- EAS Intelligence Reporting of jammer and metal foil alarms by store, so retailers can analyze, isolate, and resolve ORC vulnerabilities
- Electronic Public View Monitors providing shelf-level visibility and linked to advanced detectors for end-to-end recording of theft events
- Video Analytic Solutions that monitor shoppers' dwell time to detect and report ORC-signature "sweeping" events

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Leverage our strength and experience

Tyco Retail Solutions, a unit of Tyco International, is a leading global provider of integrated retail performance and security solutions, deployed today at more than 80 percent of the world's top 200 retailers. Customers range from single-store boutiques to global retail enterprises. Operating in more than 70 countries worldwide, Tyco Retail Solutions provides retailers with real-time visibility to their inventory and assets to improve operations, optimize profitability and create memorable shopper experiences.

The Tyco Retail Solutions portfolio for retailers is sold through ADT and authorized business partners around the world. For more information, please visit www.tycoretailsolutions.com.

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