DYNAMIC ACTION

IHL GROUP

HARD DATA, SMART DECISIONS

Research Study

Retailers and the Ghost Economy

$1.75 Trillion Reasons to be Afraid

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About IHL Group

Who We Are

IHL Group is a global research and advisory firm specializing in technologies for the retail and hospitality industries. The company, based in Franklin, Tenn., generates timely data reports, offers advisory services and serves as the leading retail technology spokesperson for industry and vendor events.

What We Do

IHL provides customized business intelligence for retailers and retail technology vendors, with particular expertise in supply chain and store level systems. Our customers are retailers and retail technology providers who want to better understand what is going on in the overall technology market, or wish to identify specific equipment needs for the retail market.

When We Started

Greg Buzek served as Product Development Manager for two Fortune 500 retail technology suppliers for 6 years. Faced with making recommendations to senior management with spotty reports stuffed with technical jargon and unsubstantiated data, in 1996 he left to form IHL Group as an arms length consulting firm that delivers exacting research to corporate managers.

How We Work

Reliable market analysis is essential for corporations to accelerate revenue and expand their market share. Most research providers do not disclose data sources or statistically defend the validity of their assumptions. We do. We disclose in precise detail exactly how and why we reached our conclusions so that our customers can be comfortable with the data they are using.

What We Know

Our associates and advisors have over 100 years combined years of retail technology experience. Our associates have worked as product managers, sales representatives and executives in the retail market. We have the relationships, tools, and experience to meet your research and consulting needs.

Study Sponsorship

The Ghost Economy research is the combination of several primary research studies of different audiences and then combined with overall retail sales worldwide. The following is a cut of the IHL Inventory Distortion Research commissioned by DynamicAction.

DynamicAction commissioned a view of the data for a specific breakout of Inventory Distortion along with Sales Returns. While the overall Inventory Distortion model has been an ongoing product of IHL (the size of the issue) for 5+ years, further primary research was conducted in terms of how the causes of inventory distortion should be apportioned (Systems disconnect versus People and Supplier Issues). The results of that research along with Sales Returns combined into this commissioned study for a total called the Ghost Economy.

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Introduction

What is the Ghost Economy?

Mostly unseen by retailers, the Ghost Economy is the cost of Overstocks + Out-of-Stocks + Sales Returns.

When you think about retailing, the focus is on advertising, marketing, presentation, and the sale. And when we think of the $14.5 Trillion retail economy, this is where we focus as an industry.

Yet hidden among the same stores and online marketplaces are a tremendous amount of inefficiencies, monies left on the table due to a host of reasons that equate to the loss of sales that otherwise were available.

Reasons for these inefficiencies range from improper marketing, failures in forecasting, supplier issues, internal personnel issues, mandated legislation from government organizations and even weather issues.

Some of the reasons can be planned for, many others cannot. We will spend the bulk of this study explaining the opportunities to improve and sizing those opportunities for retailers.

There is an old adage that says where there is mystery there is margin. This study quantifies the margin for this mystery.

$1.75 Trillion

Worldwide total lost revenue opportunities in Ghost Economy

Summary Highlights

A huge problem or great opportunity?

At a high level, this is the opportunity in front of retailers today.

Some Definitions

Segment Definitions

In this research we have combined the retail and hospitality segments into 3 categories.

FDCM – This is a combination that focuses highly on consumer goods and fast end checkout systems. Food/Grocery, Drug Stores, Mass Merchants/Warehouse Clubs/Hypermarkets, and Convenience/Forecourt Operations. Here speed of transaction and volume of customers is paramount. In most cases, POS is concentrated in lanes at the front of the store.

GMS – GMS stands for General Merchandise stores and here we have retailers ranging from Department Stores, to Specialty Soft Goods stores for Apparel and Shoes, along with Specialty Hard Goods retailers like DIY, Electronics, Furniture, Pets, Sporting Goods. Most notable about this category is there is something more detailed about the transaction than simply a UPC code. Instead we are dealing with Color, Size, Installations, Warranties, or some other component that makes the transaction more lengthy. And thus POS is often distributed in most cases throughout the stores.

Hospitality – In our use of it here this is a very broad group that ranges from hotels, casinos, and amusement parks to Fast Food and Bar/Restaurants.

Region Definitions

For the breakout by regions of the world we use the following definitions. We use these definitions because this is how many of the major vendors in the market define their market areas…even though our geography teachers might disapprove.

NA – North America (US and Canada)

EMEA – Europe/Middle East/Africa – This includes Russia

Asia/Pacific – Asia/Pacifc – This includes everyone from Australia to Singapore to Japan, Korea, China, and India and all countries in-between.

LATAM – Latin/South America – This is everyone from the Caribbean south. Mexico is included as to group the Spanish speaking countries together.

Too Many/Too Few/Unhappy Returns

Overstocks, Out-of-Stocks, and Returns are inefficiencies everywhere.

We looked at three core areas when it came to defining the Ghost Economy. These three areas include gross inefficiencies where technology can be deployed to recapture sales that would otherwise be lost.

Overstocks – Sales that occur at a price point where the retailer takes a loss.

Out-of-stocks – When customer wants to buy something but leaves due to unavailability of merchandise they want to buy (for reason other than price.)

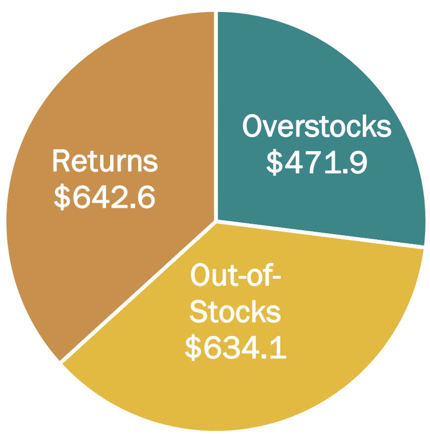
Returns – Merchandise returns for any reason

The point of the research is to quantify all causes so as to define the losses. Not all losses can be recaptured. Many can, others cannot. The purpose here is not to say which can and cannot be saved, but rather to quantify the issues in a deeper context.

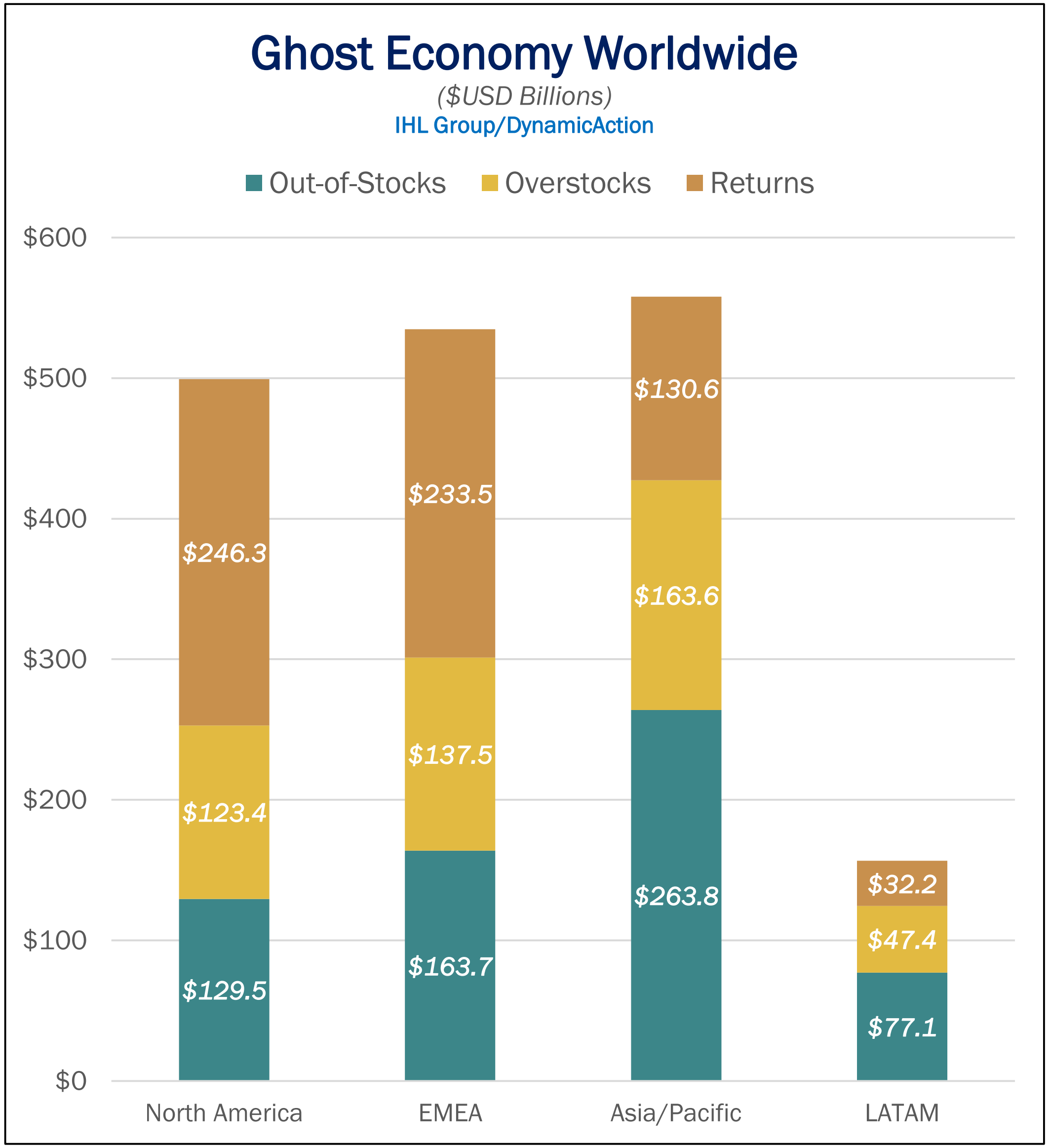
Ghost Economy - $1.75 Trillion

IHL Group/DynamicAction

($USD Billions)



Ghost Economy - A Worldwide Problem



Regional Differences

North America - Better forecasting tools have improved overstocks and out-of-stocks performance in recent years, but returns driving nearly half the Ghost Economy. Rising return fraud and income disparity driving challenges in certain categories.

EMEA – Emerging markets with poor controls leading to growing overstocks/spoilage and out-of-stocks as economies grow. Stagnate economic growth in Europe increasing returns.

Asia/Pacific– Booming middle class leading to more Out-of-Stocks for key merchandise, yet lack of refrigeration and spoilage remains core issue.

LATAM –Product availability remains largest problem as well as theft in many markets. Certain countries growing but widespread corruption and income disparity leading to shortages, particularly for hard goods.

Key Highlights

How Much Are Retailers Losing?

$285b
Due to bad processes

$223b
Due to data disconnect

$220b
Due to bad forecasting

$162b
Defective/poor quality merchandise

$83b
Because got better price elsewhere

$74b
Because price mismatch with ads/online

$63b
Inconsistent sizing

$28b
Due to return fraud

Components as a Part of Ghost Economy

11.7% of Retail Revenues

Combined, the total cost of inefficiencies in the Ghost Economy equate to losses equivalent of increasing same store sales by 11.7%.

Overstocks – Forecast failures, mis-timed marketing, supplier issues, people issues, etc. lead to loss of 3.2% of revenue for average retailer.

Out-of-stocks – Empty Shelves, lack of staffing, misplaced inventory or supplier delivery problems leads to a revenue loss of 4.1% for an average retailer.

Returns – Defective merchandise, wrong sizes/Items, price mismatches, return fraud, and buyer's remorse cost the average retailer 4.4% of revenue.

These figures help define the improvement opportunity. Better aligned systems, forecasts, and insight can help recapture 50-70% of these losses. Knowing what the problem is and how to attack it is key. The best part, this revenue gain doesn't come at the expense of attracting one more customer or opening one more store. It is simply doing things they do smarter.

What is to blame for Inventory Distortion

Too many or too few?

The cost of Overstocks and Out-of-Stocks. The following section looks at Inventory Distortion in more detail and sizes the specific lost revenue opportunities to be recaptured.

The combined cost of inventory inefficiencies

In 2011 we first coined the term Inventory Distortion or rather the combined cost of Overstocks (having too much inventory) and Out-of-stocks (not having what the customer wants to buy when she wants to buy it).

Overstocks are measured as the value of income lost for those items sold below cost, plus the labor involved in dealing with them until they are sold or dispensed with. In this study, we only count the lost revenue due to the discounts.

Out-of-stocks are defined as any time the customer comes in willing to buy something and leaves without buying that item for any reason other than the fact that they didn't like the price. This can be due to product not being there, no access to the product, or lacking the personnel to help the customer.

We surveyed consumers and retailers doing business around the world regarding the performance of each and then combined the two into the forecast model. Our initial research looked only at Food/Drug and then General Merchandise Retailers. This Ghost Economy research includes also Convenience/Forecourt operations and Hospitality segments.

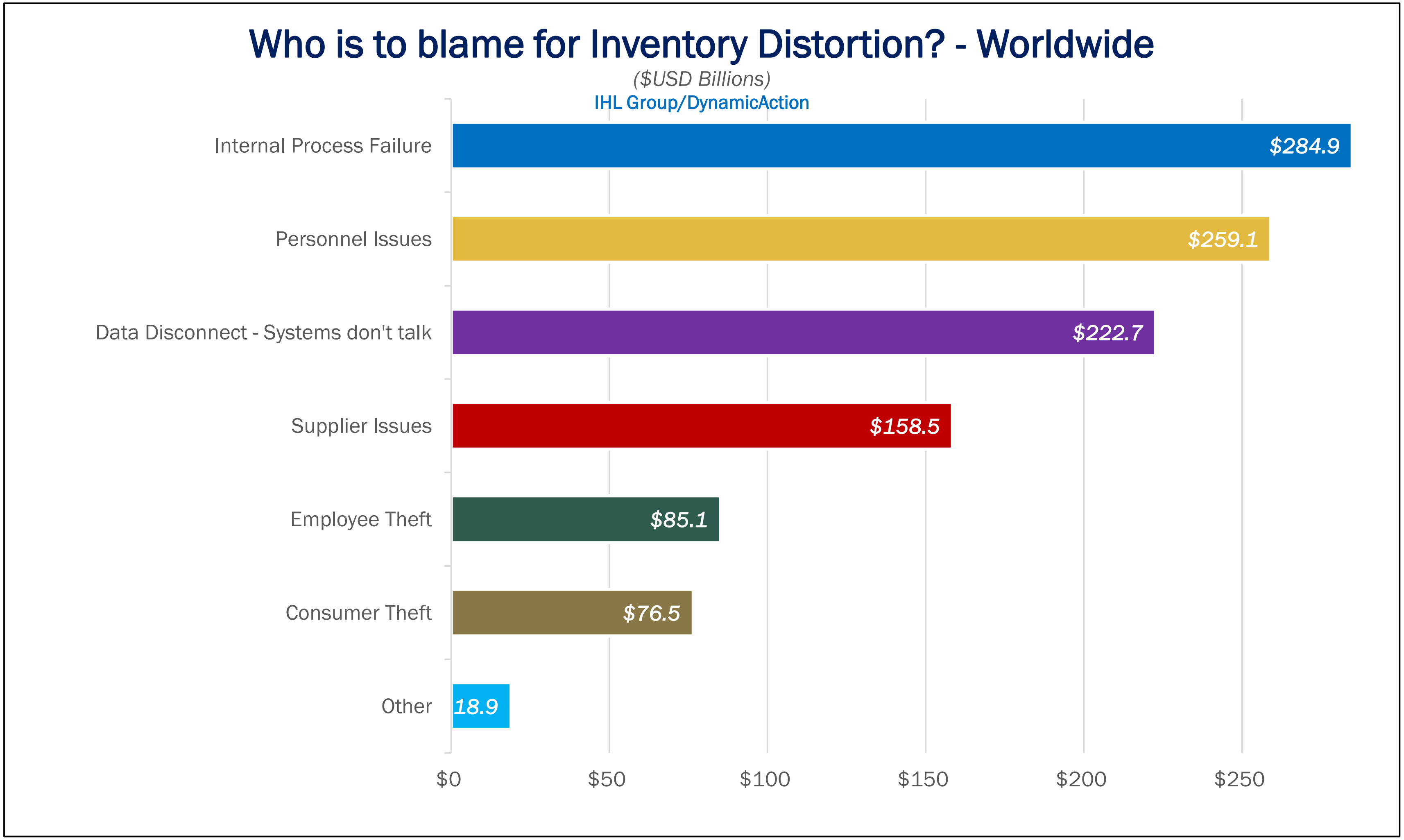
$1.1 Trillion

Worldwide cost of Inventory Distortion

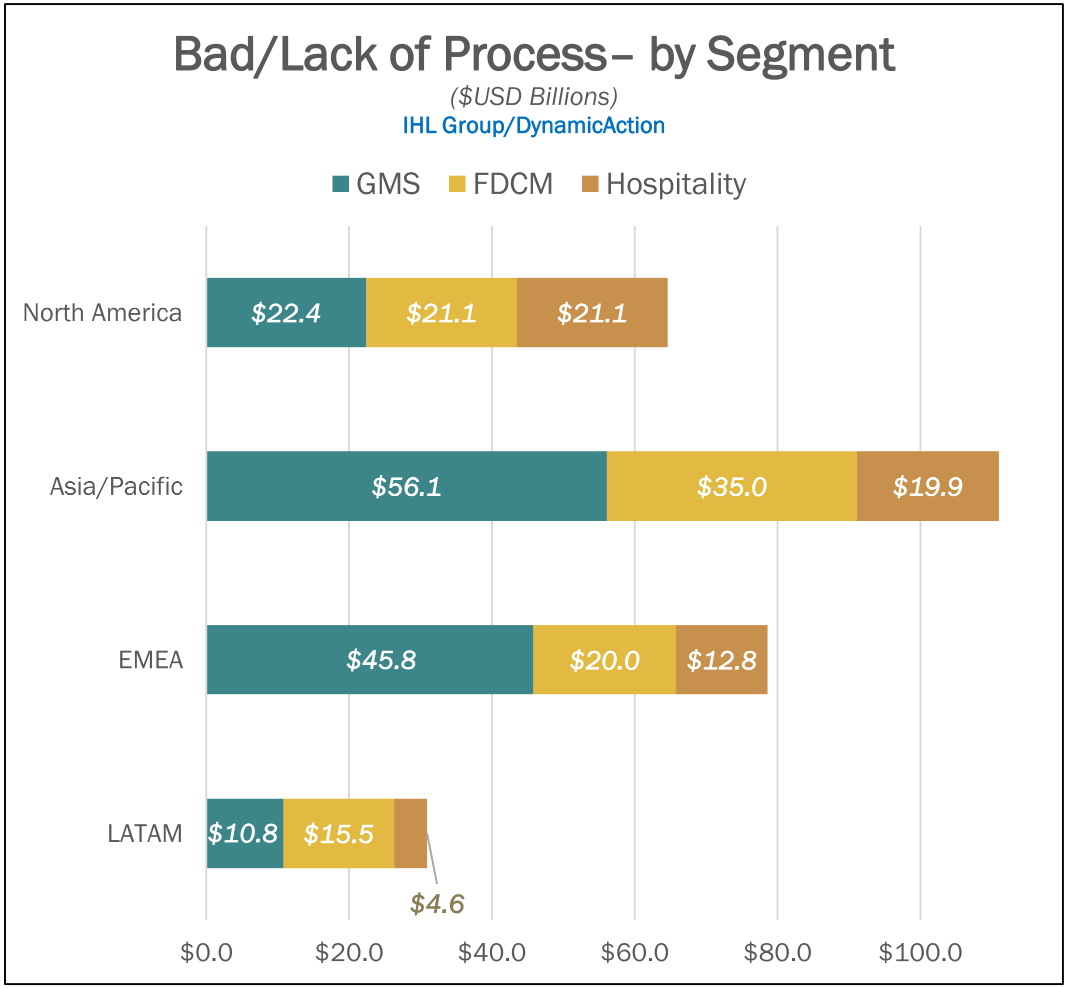
Although there have been improvements in inventory accuracy due to better forecasting tools, the total cost of Inventory Distortion has grown as emerging economies grow with bad processes.

North America was the only region to improve Inventory Distortion performance since 2011. Core European retailers also saw improvement, however, that has been eclipsed in the total EMEA region as growing Middle Eastern and African countries have expanded their economies but without the same rigor of forecasting technologies afforded the larger European retailers. Asia has seen the most dramatic change in retail landscape since 2011. A rapidly growing middle class in China, Singapore, and Malaysia has led to severe out-of-stocks in certain categories previously out of range for consumers. At the same time, continued rapid population growth and lack of suitable infrastructure dramatically increased spoilage in India and other countries.

Spreading the blame



Bad Processes cause greatest distortion



$284.9 Billion is lost due to poor or non-existent processes.

Do you sell what you have or have what you can sell? Are the systems in place to keep products fresh? When we asked retailers about spreading the blame about overstocks and out-of-stocks, 29% of the time they blamed poor processes. Whether it is adequate refrigeration, proper training, adequate relationships with intermediaries, or disconnects between departments, the lost opportunities due to process issues that can be fixed are huge.

Retailers would be well served before undertaking any technology overhaul to make sure an appropriate business process model is completed.

The vast majority of these issues are processes that made sense at one time, but either the business outgrew it or changed making the process a bottleneck.

Inventory Distortion

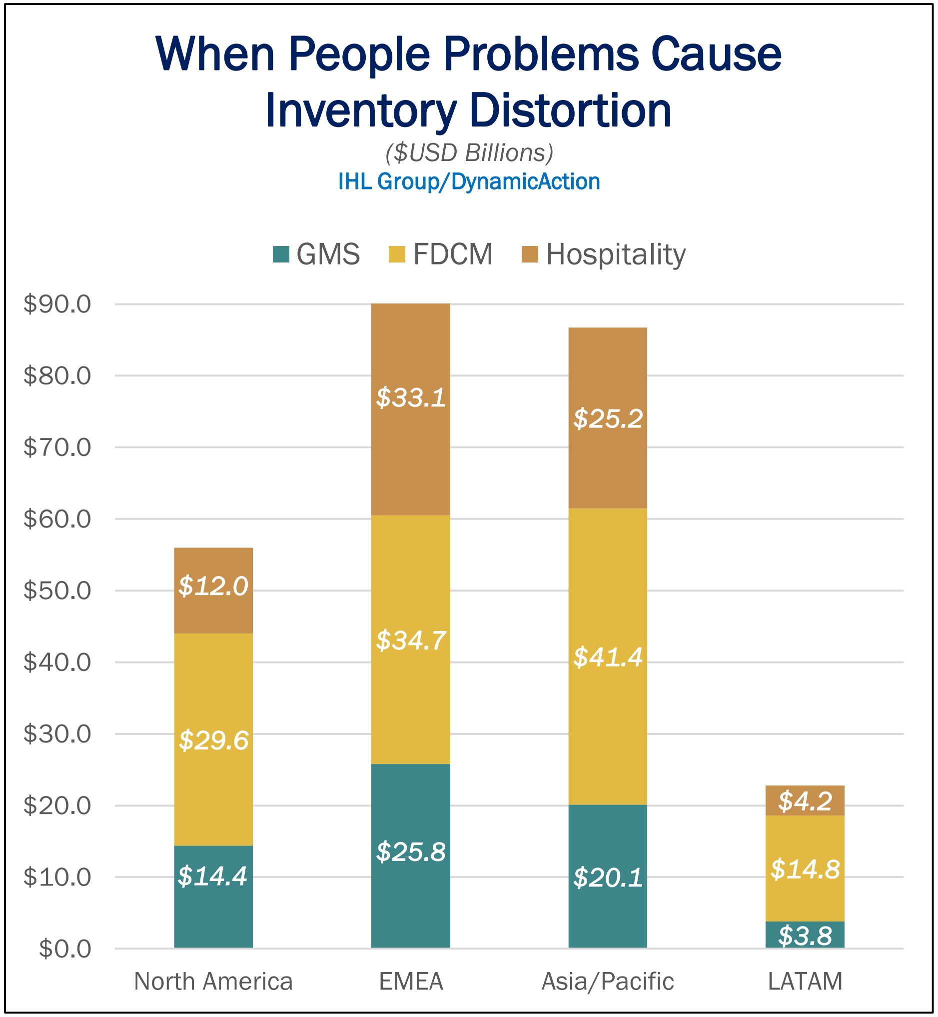
People Problems

$259.1 Billion is lost each year worldwide due to people issues.

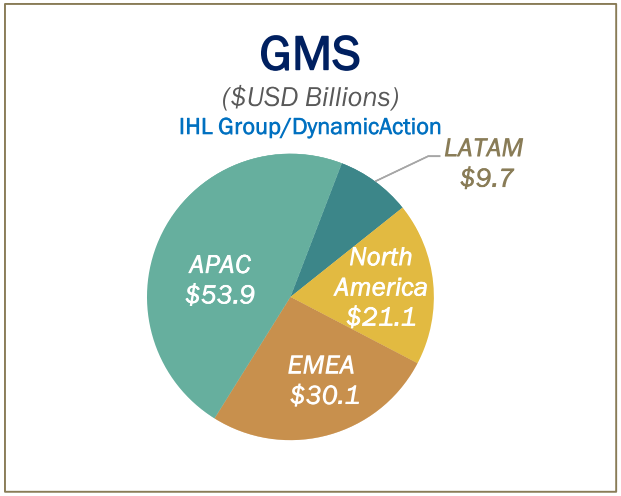
As much of retailing continues to be automated at a rapid pace, at it's core the industry is heavily reliant on people to make the right decisions.

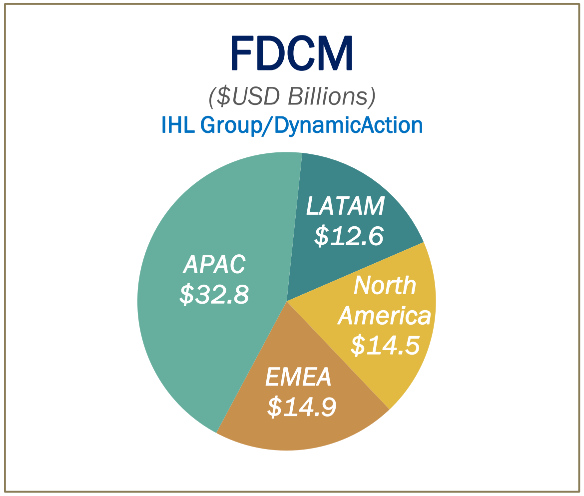
When it comes to Overstocks (or markdowns below cost), the people issue is quite a broad category and includes everything from employee mistakes, to laziness, to lack of training, to outright fraud by offering discounts below what should be. For Out-of-Stocks similar issues come into play.

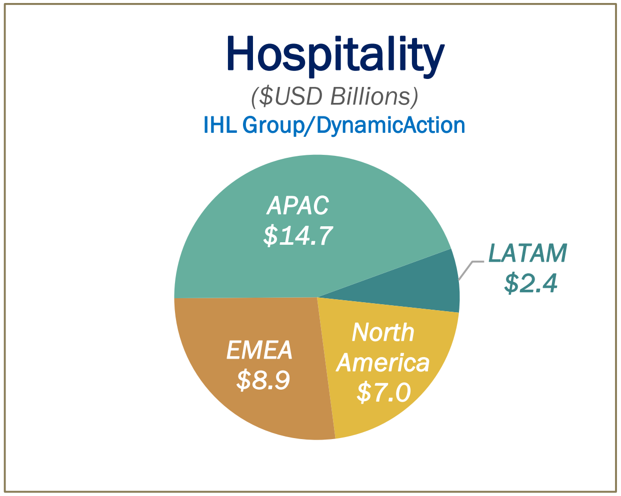
Whether the inefficiencies are willful or lack of training, skillsets, labor scheduling technologies or simply not enough people to adequately serve the customer, retailers rate this as second biggest issue when it comes to Inventory Distortion causes after poor forecasting tools. The largest problem is in the perishable categories where failure to meet deadlines means spoilage and lost sales.



Data Disconnect – Systems Issues



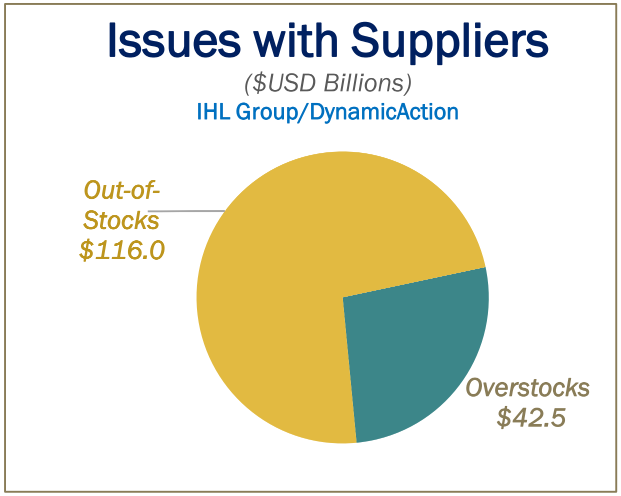




Systems issues can come in many forms. Most notably these fit into Operational data issues (data not being collected), Organizational issues (where data is hoarded or not shared across business units), and then Data issues where systems are incapable of sharing data. Together these are to blame for $222.7 Billion in lost revenue opportunities worldwide.

Retailers that can track underlying issues in a single system have the greatest opportunity to recapture lost revenue opportunities by taking action on hotspots. Approximately 60% of those opportunities are due to retailers not systematically measuring the impact of overstocks and out-of-stocks. Another 25% is lost due to business units tracking the information but not sharing it across the enterprise. Finally 15% ($34 billion) is lost because systems can't talk to each other.

Issues with Suppliers



$158.5b

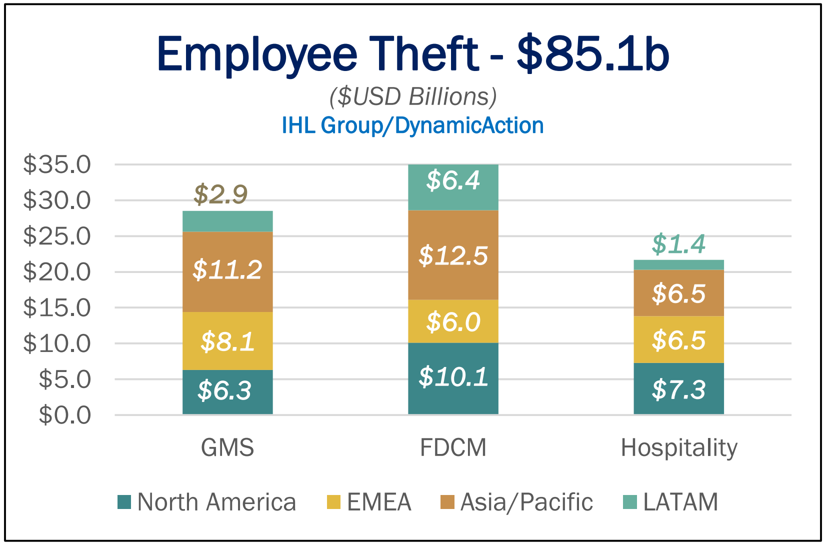
Lost revenue opportunities due to Supplier Issues

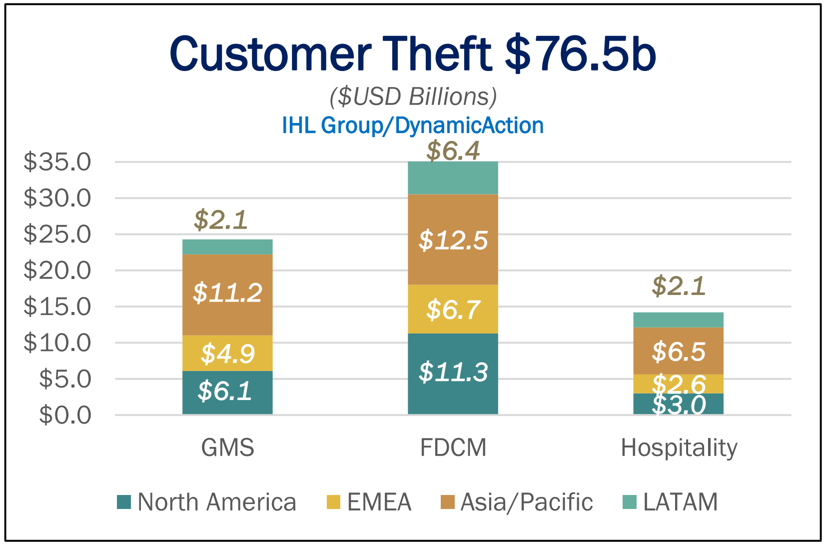
Not all the of the issues are under control of the retailer. Supplier issues, either in providing too much product against forecast, delivering at the wrong time, or not being able to fill orders, remain a tremendous problem for retailers.

Nowhere is this a bigger issue than with consumer electronics where 1 in 3 customers leaves the store without buying something they came into buy. Scarce quantities, poor forecasting by the suppliers, unavailable raw materials or work stoppages in factories and ports as well as government regulations all add to these problems. Manufacturing has grown offshore, the potential for disruption of the supply chain process is great. Better integration of systems and data sharing between retailers and suppliers can greatly improve individual supply chains.

Inventory Distortion

Items walking away





The combined costs of Employee and Consumer Theft represent revenue losses of 161.6b worldwide or 1.1% of revenue for the average retailer.

Overall there are numerous studies on shrink which is a superset of theft, damage, and other write-offs. Here we are focused specifically on theft. Worldwide the theft with employee involvement is considerably higher than customer theft. This is one of the reasons for the surprising data seen in most places where self-checkout is used for technology. Customers tend to me more honest than employees at the front end. In particular, the customers who do steal are far more likely to do it away from the POS where more cameras are focused.

Methodology

Background on the study

How we arrived at the numbers

Background of the model

The Ghost Economy research is the combination of several primary research studies of different audiences and then combined with overall retail sales worldwide.

We did a series of three different primary research studies of retailers in various regions to understand how they measure and classify out-of-stocks and overstocks. In addition, we surveyed retailers concerning how they handle, quantify and classify returns. The results of these studies serve as the baseline for each retail segment on how they measure the magnitude of each problem.

We also added a consumer experience component. In particular, when it comes to out-of-stocks consumers use a much wider definition of the problem, they were able to point to their experiences in different shopping formats when they went to buy but left without buying an item for some reason other than price.

Finally, we applied one of IHL's long-standing products to help bound the magnitude of the problem on a regional and worldwide basis. Simply, our Retail WorldView model takes into consideration differences in retail sales, sales density, rise of middle class, % of disposable income, and shopping experiences of consumers for perishable and non-perishable items, among other pertinent issues. By applying Retail WorldView to the results of the other research efforts, we were able to size in $$$$ the magnitude of the problems. This is one step that most research houses would not perform, but our ability to do so lends great confidence to the figures presented herein. Our hope is that vendors and retailers can utilize the data contained herein to track and regain lost revenues by fixing these issues.

Thank You

contact information

For more info, please contact us at

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About DynamicAction

Simply put: DynamicAction gives meaning to retail data. Inspired by a group of retail executives and big data experts with a shared vision, DynamicAction is a system that offers one source of truth that instantly connects data from every part of the organization – merchandising,
customers, marketing, operations, returns and finance – across all channels. It is a prescriptive analytics solution that determines what's impacting profit and revenue, and then prescribes the actions to most positively impact the business.

DynamicAction is touted by the world's top retailers as a "business revolution" and "like walking into a dark room with a very bright torch," while research firm Frost & Sullivan declares it's "first-of-its-kind technology" and "critical for retail success." It enables retailers across the globe, including Neiman Marcus, Brooks Brothers, Sur la Table, Tesco, T.M. Lewin, Nine West and Cole Haan, to make more accurate decisions and to get to fast, profitable action on more than $15 billion of consumer transactions each year.

Headquartered in Silicon Valley, DynamicAction has offices in London and Dallas. Connect with us at www.DynamicAction.com and @Retail_DnA on Twitter.

HARD DATA, SMART DECISIONS

Highlights of Other IHL Research Available Include:

Research	Price
Cloud POS – Why the Time Might Be Right	$1,495
Retail 2018 – Retail Transformed – 12th Annual IHL/RIS News Study	$3,495
EMV: Retail's $35Billion "Money Pit"	$1,995
CMO Takes Over IT Spend	$1,995
Mobile POS – Reaching Escape Velocity	$3,295
North American Retail POS Terminal Study	$3,295
Europe/Middle East/Africa POS Terminal Study	$3,295
Asia/Pacific POS Terminal Market Study	$3,295
Latin/South America POS Terminal Study	$3,295
Mobile POS SW Share	$4,000-$6,000
Rise of Distributed Order Management	$2,495
What do we see? Predictive Analytics/Data Visualization	$2,495
Beacons, Wayfinding and IOT in Retail – Trends and Best Practices	$2,295

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