

**AN ASSESSMENT OF THE IMPACT OF RETAIL SHRINKAGE
ON SUSTAINABILITY AND PROFITABILITY: A CASE
STUDY OF A ZIMBABWEAN RETAILER**

Makaza Fainos

Chigaru Raphaely

Abstract

The main objective of the study was to evaluate the impact of retail shrinkage on the sustainability and profitability of a Zimbabwean retailer. This was done in order to come up with ways to improve sustainability and profitability of retailers due to the dwindling effect of shrinkage on profitability and future sustainability of the retailers. The research used a qualitative research design. The sample was taken from the employees of the retailer randomly. The findings of the research indicate that internal theft is a cause of retail shrinkage, inaccurate pricing, scanning and errors and inaccurate stock counts. The findings also indicate that the impact of shrinkage is a negative one on profitability and future sustainability of the retailers. The study recommended that the retailers should embrace technologies such as visual deterrents, POS and alarms. The retailers should conduct preventative audits and make use of performance related awards for management to instill the reduction of shrinkages amongst the employees.

Key words: Shrinkage, sustainability and profitability

Introduction

Shrinkage is a problem that has demonstrated to be resistant and stubborn to the many regardless of rigorous efforts to address it stretching more than forty years (Bernstein, 2012) and varied attempts to reduce its impact on retail profits. Taking Europe for an example, shrinkage cost the sector 24 billion pounds in 2003 (Beck, 2004) and Spain in particular 4 billion euros in 2011 (Global theft Barometer, 2011). Retailing involves the purchasing of consumer goods from wholesalers or manufactures for resale, without conversion, to the general masses for own or household use (Coughlan et al, 2010:425; Statistics South Africa, 2011b: 166).

Table 1. Shrinkage Results at Selling Price

Financial years	2012	2013	2014
Sales(\$ millions)	1.62	3.21	5.47
Shrinkage value(\$)	40500	45000	49200
Shrinkage % values	0.9	1.4	2.5
Variance (%) to Average	0.1	0.6	1.7

(Source: Annual Internal Reports (2012-2014))

Comparing with the set standard of 0 - 0.8% for all branches the retailers shrinkage percentages have constantly remained above the set standard for the past 3 years. Shrinkage percentage increased by 0.5% from \$40,500 as at December 2012 to \$45,000 as at December 2013 this was mainly attributed to wastages/spoilages, and also mark downs exercised. As at December 2014 shrinkage percentage was at 2.5% increase of 1.1% from 2013 financial year this was mainly owed to shop theft as put forward by the branch manager as shown by Table 1. But the problem is, the degree to which shrinkage is taken the wrong way has led the current understanding of shrinkage to be defined as, "myopic." As postulated by Beck et al. (2009).

Beck (2010) sites that shrinkage is an important issue for organizations to consider, not least because shrinkage is a significant cost to the Fast Moving Consumer Goods (FMCG) grocery industry. According to the Branch Manager (*Annual Branch Reports 2014*) shrinkage is also affecting the pricing strategies of different departments namely takeaway, bakery, fruit & vegetables, butchery and the grocery on what prices to cost products being evidenced by the closure of the takeaway department since the department could no longer match prices quoted by competitors.

The General manager was much concerned with the way the branch was performing towards this issue and further sited that it is affecting the overall profitability of the branch (*minutes from a*

meeting with the bookkeeper in charge for the financial year ending 2014). According to (Beck, 2010; Bernstein, 2012) shrinkage is an important issue to retailers as it has great effect on profitability in this fairly slim margin sector. Chapman & Templar (2010) site that in order to show the impact of shrinkage to profitability, shrinkage can be presented as a percentage of profit. As shown by the Table 2 for the retailer's financial results.

Table 2. Percentage of shrinkage to profit

Financial year	2014	2013	2014
Profits	73 100	75 000	90 000
Shrinkage	49 200	45 000	40 500
Profit after shrinkage	23 900	30 000	49 500
Shrinkage % of profit	67.3	60	45

(Source: financial statements of the retailer)

The above table shows that shrinkage cost are rising and eating into the profits. There is an increase of 22.3% in shrinkage costs. Without monitoring the retailer will suffer losses that may ultimately affect their going concern. The merit of this way of presenting shrinkage is to highlight that shrinkage reduction presents an opportunity to increase profits (Chapman & Templar, 2010) by 45% or 60% or 67.3% if the costs are maintained

Management have tried best in their capacity to minimize this problem by putting up measures such as installing CCTVs, Scanners, Security checks after working hours etc. But, they cannot seem to figure out the motivating factors towards its incurrence. Abnormal shrinkage can arise from both quantitative and qualitative factors which are generated from the branches and the head office. Beck (2010) reports that most shrinkage (51 percent) is unknown. Understanding shrinkage is very vital for organizations and their stakeholders because it affects retailer profits, management well-being, and the prices consumers should pay for their merchandises (Bailey, 2006; Dunlop& Lee, 2004; Payne& Gainey, 2004 quoted in Avery, 2012:105)

Literature Review

When considering why sales income might not be achieved, an evaluation of the existing literature on shrinkage proposes that the most typologies are centred upon four broad classes of loss (Beck et al, 2010). According to Bamfield (2013) the main sources of retail shrinkage are: shoplifting (theft by customers); theft by employees; theft and fraud by vendors and suppliers;

and process failures and accounting/ procedural error, such as incorrect pricing and invoice problems. Internal theft is involved with the loss of merchandise conveyed out by personnel directly employed in an organisation. Theft of merchandise by internal staff includes direct stealing from stock rooms furthermore shop floors (Dunne et al, 2011), an arrangement or collusion with shoppers or suppliers to steal merchandise or defraud the retailer (Newman and Cullen, 2010) additionally cashier fraud (Newman and Cullen, 2010). In addition the retailer suffers from what is termed pilferage (stealing in small amounts) for example a sweet per day (it is minor but when accumulated it becomes a huge cost) which is one of the main factors contributing to shrinkage values being caused by employees. From earliest studies back in 1990 until the most current data/pieces of information published in 2011, retailers have approximately estimated that employee theft takes up 45 percent or more of the total retail shrinkage (Hollinger & Adams, 2013). In America it has been approximately valued that internal theft accounts from 10-20 percent of the cost of goods bought by consumers (Hollinger & Clarke, 2010) and it takes on a significant piece in the Liquidations of between 30-50 percent of all organizations setting off under bankruptcy (Greenberg, 1997 quoted in Hollinger & Davis, 2010).

Practically definitions about shrinkage have a preference for the term “vendor fraud” over inter-company fraud when examining this issue, putting the blame solidly on the supplier of the retailer. This is perceived as losses due to the fact that the suppliers or their agents intentionally deliver fewer products than the retailers are ultimately billed for or delivering goods of inferior quality than initially approved by the retailer (Kohne & Pekeur, 2014). Vendor fraud poses a challenge when it comes to control as suppliers normally have a right to use the retailer’s delivery bay when delivering merchandises furthermore, at the shop floor where the supplier’s merchandisers are frequently needed to fill up shelves (Gilbert, 2011). The retailer’s, suppliers and merchandisers are given permission to access the receiving bay of the branch even the warehouse and also the shop floor since products for each supplier need constant restocking on the shelves.

Process failures is the aggregate of whole lot of things that go wrong as merchandises make their venture from conveyance to the retailer to their ultimate departure at the front entryway of the shop in the hands of a consumer, exclusive of employee and shop theft (Fisher et al., 2010). The chances of shrinkage due to human error are many, looking at the number of transactions generally administered by retailers (Gilbert, 2011:140 and Hasty and Reardon: 2013, 384).

Process failures, or administrative losses, is considerably more difficult and open to extensive variety of explanations. Maybe the most comprehensive by all accounts the definition presented by the ECR Europe shrinkage review in 2004 which gives respondents advice on what process failures comprises of: which is losses due to working methods inside an organization comprising products which have expired, or have gone through a price reduction; inaccurate pricing; errors in product identification; inaccurate inventory counting; products which have been damaged; scanning errors; and errors in deliveries to the shops (e.g. short deliveries due to errors in picking and dispatching from distribution centers)' (Beck, 2010).

According to Bamfield (2013) fluctuations in loss prevention expenditure may likewise have influence in abnormal shrinkage incurrence for example, the year 2009 was one where numerous retailers reacted to the fall in customer demand by decreasing their loss avoidance budgets alongside every single other budget as a method of cutting the operational costs of the business. Here retailers were just reacting to the impacts of the recession, and as shrinkage rates had fallen in the earlier year the risk of doing such may have appeared insignificant. However in 2009, shrinkage rates ascended from a normal of 1.35% to 1.43% (GRTB, 2009). Shrinkage fell in the subsequent year to a normal of 1.36%, however by then retailers had generally restored the 2009 budget decreases. The retailer due to the prevailing economic conditions characterized by liquidity crunch and shrink in aggregate demand the retailer is being forced to cut its expenditure structure or operational costs even its loss prevention expense so as to revive its dwindling profits which is promoting abnormal shrinkage incurrence in its branches being exemplified by the retailers shrinkage incurrence trend for the past 3 years.

However, Chee Yew (2013) argues that employee theft is a major cause of abnormal shrinkage and there is a yearly increase of shrinkage in the retail sector caused by employee theft as employees are family members of an organization, retailers are losing an immense amount of money to the tune of \$266 million a year because of theft and 3.9% of it is stated to be from employees. In conclusion from the causes put forward from other school of thoughts the objective of this research is intended to examine the causes and which of the causes contribute to retail shrinkage retail shrinkage at the retailer in a Zimbabwe setting. According to (Beck, 2009; Bernstein, 2010) shrinkage is a significant issue to retailers as it has a major impact upon profitability in this relatively low margin sector. Tyco (2011: 4) sites that shrinkage impacts retailers straight and incidentally. Besides causing financial losses, shrinkage impacts them

directly by increasing stock outs in shops. On average, a retailer is required to sell more than three product items to compensate the profit dollars for a single stolen product. Furthermore, (IHL Group, 2011 quoted in Tyco, 2011: 4) closes saying retailers internationally are losing \$773.6 billion in yearly sales as a consequence of stock outs on the merchandises customers always want to buy. As per this study, IHL Group did find out that retailers could increase sales by an average of 9.2 % if they possibly try to keep products in stock.

Beck et al (2012: 5) narrowed their survey to Europe and propose that, the Fast Moving Consumer Goods division in Europe is an immense business with a collective market turnover of more than 820 billion pounds, shrinkage is foremost a danger to the efficiency and effectiveness of the sector. In 2011 retailers suffered a loss to the tune of 13.4 billion pounds due to shrinkage likening to 1.75 percent of turnover or 258 million pounds a week. The effect on profitability is intense and they proposes that retail profits could be 29 percent higher if retailers minimized losses due to shrinkage by 50 percent (Beck et al, 2012). Chapman et al (2010) argues that shrinkage adds up to 18 billion euros across Europe approximately the same as the Slovakian economy and they further propose that if all shrinkage is eliminated retailers profit margins would rise by 58% adding 1.7% to the bottom line. Tyco (2011) postulates there is need to prevent shrinkage incurrence because shrink affects retailers incidentally by adversely affecting customer satisfaction. When bearing in mind the direct relationship between customer satisfaction and future incomes, it is easy to appreciate the significance of shrinkage control to reduce its undesirable impact on the retailer's profit. (Gruen et al. 2002 quoted in Chen, 2014: 2) poor customer satisfaction and shelf stock outs due to Shrinkage are a major source of lost revenue, on average these cost retailers 4 percent of their annual revenue sales.

Snyder et al. (2011) shrinkage has been titled as a principal factor in 30 % or more of many corporate failures. Shrinkage consequently causes bankruptcy or near closures. It results in lost raises and bonuses if not layoffs for employees, which is further supported by Passarella (2015) shrinkage eats up profits of retailers since their mark up on products is slim, the retail business is a game of volumes and those who break the bulk stand a better chance when it comes to survival. This is so because markup regime on products practiced by the retailer at first ranged from 40-50% but for the past 2 years the markup on goods was brought down, it now ranges from 15-25% due economic conditions being experienced in Zimbabwe (liquidity challenges, shrink in aggregate demand). However, Okwo & Ugwunta (2012) argue that retail shrinkage is an

insignificant cost if we are dealing with a particular retailer but when it's aggregated it becomes significant as compared to other operational costs such as wages and salaries, Other school of work that agree with the findings of Okwo & Ugwunta (2012) include (Mirko, et al. 2006; Kayode et al. 2006; Agiomirgianakis et al. 2006; Song-yi and Louis. 2007; Zeprep 2009; Ajayi et al. 2009) cited in Okwo & Ugwunta (2012) these researchers' results reviewed that a company's profitability is affected mostly by the upsurge in costs such as labor rather than retail shrinkage. Hence it is essential that the internal components of cost of sale such as labor costs and overheads must be reduced to the simplest minimum since, they contribute/take up a significant percentage in the cost structure. According to Tarasoff (2014) "shrinkage costs a retailer a lot in terms of lost profits and everybody pays for this.

According to Roberts (2015) it is not retailers only who must be worried about shop theft, shop theft affects everybody. Eventually customers are hurt the most in the form of higher prices". Which is further propelled by Apparel (2009) shop-theft has a direct effect on customers, who end up being charged and ultimately pay higher costs as retailers attempt to compensate for lost incomes and supply unavailability. "Shrinkage eats up profits," as put forward by Passarella (2015). For each product lifted, numerous products must be sold to make up for the loss. Consumers are deprived the chance to buy that product. What's more the expense of managing the delinquency that happens a chunk or a part of it is paid by the consumer through an upsurge in the cost of products being sold. But for those who practice premium pricing this raise does not impact much on consumer demand. Birendra et al. (2010) supports this assertion shrinkage results in no salary raises or bonuses and ultimately higher prices for consumers.

Joseph & Media (2015) further supported this notion saying, to compensate for their lost sales, retailers regularly choose to raise their cost of goods. In organizations where shrinkage is a challenge like in the consumer goods industry, this implies customers should pay higher prices for products they are in dire need. For organizations which sell exceedingly price sensitive products, a hike in the cost of goods puts them at a competitive disadvantage

For example Finklea (2012) reviewed the other side of the coin, that retailers responding also to the 2010 National Retail Security Survey spent an average of 0.46% of their annual sales on loss prevention measures. These loss prevention costs were ultimately borne by consumers in the form of higher prices on goods.

However Sullivan (2010) is of the view that retailers sometimes encounter an overstocking problem and products face the risk of going bad, to clear this problem retailers usually markdown products (reducing the price). Most retailers fail or forget to document, shrinkage of this type benefits the customer at the expense of the retailer. “Administrative shrink, for example, like this resulting from missed markdowns, has a netting impact on profits. That is, this sort of shrink typically counterbalance in other financial records such as cost of sales or the shortage shows up as converse shrink in the following period” (Sullivan, 2010). The fruit and vegetables department of the retailer usually experienced this problem, the products sold in this department generally have a shorter shelf life e.g. Bananas, apples these are markdown regularly resulting in this problem of missed markdowns when recording, the figure is huge especially after holidays like Christmas because the branch usually buys farm products in bulky in anticipation of higher demand. Karl Heinz (2010) argues that increased costs must not be passed on to consumers through an adjustment in the cost of goods because of the perfectly competitive arena among industries therefore companies should maintain their prices. The retailer operates in a competitive environment which includes many retailers such as the retail giant and other small businesses, some break bulk and some don't so any price hike affects aggregate demand so most prices being quoted are competitive. In conclusion from the above literature many writers point out that retail shrinkage affects pricing strategies evidenced by price increases giving room for the need to determine how retail shrinkage affects the retailer's pricing strategies.

Methodology

The researchers used descriptive research design due to the quality and nature of information required in the research that sought to study the impact of Retail Shrinkage on profitability and sustainability. The researcher also used as a case study of a retailer for this research. Chee-Yew, 2013, Dutta, 2012, Avery et al. 2012, Wyld & Budden, 2009, Pavithra, 2012 and Birendra et al. 2006 used descriptive research design using quantitative methods to determine the relationship between age and shrinkage, Bamfield, 2004, GRTB, 2011 were mainly concentrated in finding the causes, lastly Chapman & Templar, 2006 used descriptive research design to finding out the contextual issues involved in measuring shrinkage which involved qualitative methods only. From the above researches, researchers were much concentrated to the retail industry as a whole thus they could not give specific recommendations and also they did not use descriptive research design method making use of both quantitative and qualitative methods. Lastly, there is also no

present research that seeks to find out the impact of Retail shrinkage on sustainability and profitability thus, it has prompted the researcher to carry out a study using this type of methodology using a case study approach to find out the impact of retail shrinkage on sustainability and profitability a case of a retailer from 2012 to 2014.

Discussion of findings

A total of thirty nine questionnaires were sent out to the respondents which included accountants, bookkeepers, branch management and clerks of a retailer, thirty nine questionnaires were issued out to the targeted respondents and a 69% response rate was achieved, 24 questionnaires were returned back. The major causes of retail shrinkage from the questionnaire were internal theft, external theft, and process failures. Out of the questionnaires sent 75% of the respondents strongly agree that internal theft is the main cause of retail shrinkage while 6% of the respondents generally agree that internal theft is a cause of retail shrinkage. This is reinforced by Hollinger & Adams (2013) cited that employee theft is the main cause of retail shrinkage taking up 45% of all retail shrinkage that a retailer incurs. However, from the respondents' responses they pointed out that from the category of the internal staff who are most likely to contribute more to retail shrinkage majority responded as all staff this showed that respondents were reluctant to answer and naming acted as a shift of blame on individuals thus accepting responsibility as a family. Which is supported by Chee-Yew (2013) who pointed out employees are family members of an organisation and would never reveal members of their family if there was theft. 79% of the respondents agree and 21% strongly agree that process failure is a major cause of retail shrinkage. These results are in line with Gilbert (2011) who cites that chances of retail shrinkage due to human error are many, looking at the number of transactions processed by retailers. Beck (2011) further supported this notion by giving examples of these, retail shrinkage may arise through inaccurate pricing, scanning errors, inaccurate stock counts etc. These results reveal that process failure is a major cause of retail shrinkage at the retailer.

21% of respondents strongly agree and 50% agree that retail shrinkage is impacting on profitability and sustainability of the retailer. These results are supported by Beck (2011) that impact of retail shrinkage on profitability is intense and affects effectiveness and efficiency of the retail sector. Which is further supported by Snyder et al. (2011) it is a principal factor in 30% of many corporate failures and normally results in no raises and bonuses to employees if not layoffs for employees. According to the retailer's financial statements (2012 to 2014) shrinkage

cost increased yearly from \$ 40500 in 2012 to \$49200 as at December 2014 which caused a drastic drop in profitability of the branch of 51.72% from \$49500 in 2012 to \$23900 as at December 2014 which further supported by an interviewee who respondent saying retail shrinkage was one of the reason why the branch could not declare bonuses to its employees in 2013. However, 29% of the respondents disagree that retail shrinkage is impacting on profitability and sustainability therefore they pointed out that operational costs such as wages and salaries. These results are supported by Okwo & Ugwunta (2012) who cited that a company's profitability is mostly affected by an upsurge of costs such as labour costs and retail shrinkage is list of it. Nevertheless the total of those who agree and strongly agree that retail shrinkage impacts on profitability and sustainability amounts to 71% hence forth it is evident enough that retail shrinkage is impacting on profitability and sustainability of the retailer.

37% respondents strongly agree and 63% generally agree that retail shrinkage has an effect of causing price increases to various departments of the retailer. Which is concretized by Finklea (2012), Tarasoff (2014), Roberts (2015) and Joseph & Media (2015) who postulate that for retailers to compensate for the loss incurred due to shrinkage they resort to increase their prices and eventually customers are hurt and tend to pay higher prices for the goods they need most. Which is further supported by Davis (2010) that everybody is hurt retailers resort to price hikes due to shrinkage so as to breakeven and therefore the burden is shifted to customers who are eventually hurt by high prices. Since 100% of the strongly agree and agree it can be established that retail shrinkage affects the retailer, various departments pricing strategies through price increases thus affecting the branch's competitive advantage in the retail sector.

33% of the respondents agree and 67% strongly agree that retail shrinkage affects pricing strategies of different departments by causing price reductions to products of the retailer. Sullivan (2010) supports this notion by noting that retailers sometimes markdown their products and in doing so they forget or omit them when recording in their books resulting in shortfalls which end up as shrinkage. So from the results of the respondents of 100% reveal that retail shrinkage affects the retailer's pricing strategies through price reductions also which in the end impacts on the branch's profitability level.

The types of strategies the branch is currently using to combat retail shrinkage 40% of the respondents pointed out security personnel which is supported by Image magazine (2014) that it is a powerful visual deterrent to shop theft. 30% pointed out the use of the POS system,

PcAmerica (2010) supports this notion that computerizing reduced shrinkage by 2.5% because this system promotes visibility for overall stock movements. 20% of the respondents pointed out the use of the alarm system which is supported by Tyco (2011) that this system makes products accessible to shoppers whilst protecting them against theft. Also 5% of the respondents pointed out the use of scanners, which is supported by Beck (2011) that this strategy reduces the problem of long queues because customer behaviour is difficult to monitor when the shop is full resulting in stock losses. Lastly 5% of the respondents pointed out the use of CCTVs, which is supported by Wilson (ed. 2011) that this type of system reduces unknown losses by 40-60 percent and also when thieves are caught hard evidence will be available.

However from the above systems and strategies pointed out by respondents it shows that the branch is not harnessing tagging technologies, practices such a perpetual stock counts etc. to combat shrinkage as the named systems/strategies have loopholes for shrinkage to be incurred by the branch as pointed out by Jennings (2011), Security Hr (2011) and Beck (2010). From the results above it can be concluded that the branch uses Scanners, alarms, POS system, security personnel, and CCTVs to combat retail shrinkage but these have their shortcomings being evidenced by the yearly increases of retail shrinkage at the retailer proving they are not effective alone in managing retail shrinkage.

50% of the respondents were of the view that the best practice to minimize shrinkage should be an increment of wages and salaries as put forward by Herzberg two factor theory that money acts as a motivator to employees. 29% of the respondents were of the view that if training needs were put in place this might help to minimize shrinkage, which is supported by Dutta (2012) who cited this might help in creating a sense of ownership to employees, Anand and Cunnane (2009) concretized this notion 75% of top performing retailers have incorporated this need in their operation such as e-training and shrinkage levels are being at minimum levels. 21% of the respondents were of the view that if frequent stock counts are practiced this might help minimize retail shrinkage, which is supported by Bamfield (2013) who cites that frequent loss prevention audits should be carried out they should not be just laid down rules and should be uniform for every department. However, from the responses/results of the respondents it shows that many of them are not even aware of other practices/ strategies/ systems that can be put in place to minimize retail shrinkage such as the Shrinkage road map, Loss prevention pyramid, RFIDs etc. that some retailers are putting into use.

Recommendations

The retailers should consider harnessing the latest technology such as Radio Frequency Identification Technology which is a tagging technology to minimize shrinkage when it becomes reasonably priced. It is also recommended that the retailers should consider implementing the loss prevention pyramid which requires cooperation from operations to management so as to fight retail shrinkage. The retailers should consider carrying out loss prevention audits each time to create a cost consciousness to the head of each department. Which is accompanied by frequent stock takes to minimize this problem. Management should link their performance management system with shrinkage, financial incentives of the front-end staff should be linked to shrinkage percentages and to be strict in case of employee theft (zero tolerance policy) (Dutta, 2012). This type of strategy might help retailers if financial incentives are tied to shrinkage branch personnel help each in fighting shrinkage to the required standard. Moreover retailers should implement or employ a team of mystery shoppers who visit various outlets looking out for suspicious behaviour from customers and employees as being practiced by big retail outlets such as Subhiksha in India as put forward by (Dutta 2012). This might help retailers reduce the shrinkage problem to a lower level if they try to implement this type of strategy

REFERENCES

1. Advanced Business Solutions (2010) Purchasing a POS system for a Restaurant. Available at: <http://www.abs4pos.com/files/HowtobuyaPOS.pdf>
2. Anand, S & Cunnane, C (2009) Retail Loss Prevention (LP) Systems Axis, Aberdeen Group, Inc. Thompson Available at: <http://www.aberdeen.com>
3. Apparel (2015) Retail theft cost industry, Consumers. Viewed on 25 March 2015. Available:<http://apparel.edgl.com/news/Retail-Theft-Costs-Industry,Consumers63884>
4. Avery, R, D, McKay, P. F. & Hunter, E. M. (2012) Journal of Organizational Behavior, J. Organiz. Behav. 33, 105–120 published online 29 March 2011 in Wiley Online Library (wileyonlinelibrary.com)
5. Bamfield, J. (2010). *The Global Retail Theft Barometer 2010*, West Bridgford, England: Centre for Retail Research.
6. Bamfield, J. (2011). *The Global Retail Theft Barometer 2011*, Newark, Nottinghamshire, England: Centre for Retail Research

7. Bamfield, J (2011), Shrinkage, shoplifting and the cost of retail crime in Europe: a cross-Sectional analysis of major retailers in 16 European countries", International Journal of Retail & Distribution Management, Vol. 32. Accessed on 28 February 2015
8. Bamfield, J. (2013) Changing Retail, Changing Loss Prevention. Available at: http://all-tag.com/.../GRTB_Changing_Retail_Changing_Loss_Prevention_201
9. Baumer, T. L. & Rosenbaum, D.P. (2012). Combatting Retail Theft: Programs and Strategies. Stoneham: Butterworth Publishers.
10. Beck, A. & Peacock, C. (2009). New Loss Prevention-Redefining Shrinkage Management. Palgrave Macmillan.
11. Beck, A. (2011). The Impact and Control of Shrinkage at Self-Scan Checkouts: ECR Europe, Brussels, Belgium 1205 ISSN: 2249-7196
12. Bernstein, S (2012) Complex global governance and domestic policies: four, Wiley online Library, vol 88
13. Birendra, K & Mishra, A. P, (2010), Minimizing retail shrinkage due to employee theft", International Journal of Retail & Distribution Management, Vol. 34 Iss 11 pp. 817 - 832 Accessed on 25 March 2015
14. Boone, Jr, H, N &. Boone, A, D (2012) Analyzing Likert Data, West Virginia University, Morgantown, West Virginia.
15. Campbell, J (2011) Why is 30 the "Magic Number" for Sample Size? Viewed on 7 April 2015. Available at: <http://www.jedcampbell.com/?p=262>
16. Chapman S. P.T, (2006), "Scoping the contextual issues that influence shrinkage, Measurement International Journal of Retail & Distribution Management, Vol. 34 Viewed on 23 March 2015
17. Chapman, P, Beck, A & Peacock, C (2010) A practical way to shrink shrinkage, ECR journal, Vol 2, winter 2002
18. Chapman, P & Templar, S (2010) Measuring Retail shrinkage: towards a shrinkage kpi, ECR Europe
19. Chee-Yew, F (2013) Employees theft behavior: a study in large retail organizations in Kuala Lumpur, Phuket, Thailand
20. Chen, L (2014) Fixing Phantom Stock outs: Optimal Data-Driven Shelf Inspection Policies, Fuqua School of Business, Duke University, Durham.

21. Corsten, D. (2013) Consumer Goods and Retail 3: Advanced Available at:
http://www.ie.edu/...ie/.../Profit_Protection_EN_HQ_3.pdf
22. Coughlan, A.T., Anderson, E, Stern, L.W. and El-Ansary, A.I. (2010).Marketing Channels. 6th Edition
23. Crossman, A (2015) Stratified Sample. Viewed on 7 April 2015. Available at:
<http://sociology.about.com/od/Types-of-Samples/a/Stratified-Sample.htm>
24. Crowe1, S, Cresswell, K, Robertson, A, Huby, G, Avery, A and Sheikh, A (2011) The Case study approach, BMC Medical Research Methodology 2011, Available at:
<http://www.biomedcentral.com/1471-2288/11/100>
25. Davis, J (2010) how does Shop lifting affect stores. Viewed on 25 March 2015. Available at:
http://www.ehow.com/how-does_4709716_shoplifting-affect-retail-stores.html
26. Dunne, P.M., Lusch, R.F. and Griffith, D.A. (2011). Retailing 4th edition. Fort Worth: Harcourt
27. Dutta, S (2012) Managing Retail Shrinkage Management: An Indian Experience. International journal of management research and review, July 2012/ Volume 2
28. Finklea K, M. (2012) Organized Retail Crime: Congressional Research Service
29. Fisher, M., Raman, A. & McClelland, A.S. (2010). Rocket Science Retailing is Almost Here – Are you ready? Harvard Business Review, 78 (4), 115-124
30. Gilbert, D. (2011). Retail Marketing Management.2nd edition. Edinburg Gate: Prentice Hall.
31. Hollinger, R.C. & Davis, J.L. (2011). Employee Theft and Staff Dishonesty. In McGill, The Handbook of Security (PP.203-228). Basingstoke: Palgrave Macmillan
32. Hollinger, R.C. & Adams, A. (2013) National Retail Security Survey: Final Report Gainesville, FL: University of Florida.
33. Hollinger, R.C. & Clarke, J.P. (2010). Theft by Employees. Lexington: Lexington Books
34. Janna (2015).Shrinkage costs Retail industry more than \$100 Billion. Viewed on 25 March 2015. Available at: <http://www.saleswarp.com/news/inventory-management/shrinkage-costs-retail-industry-more-than-100-billion/>
35. Jennings, R (2011) Incident and Security Management: Profit vs Shrinkage Grow and Protect your profit margins through better Incident and Security Management.

Viewed on 4 April 2015. Available at: <http://www.expolink.co.uk/Retail-fraud-and-theft.pdf>

36. Joseph, C & Media, D (2015) what impact can Shrinkage have to a company? Viewed on 25 March 2015. Available at: <http://smallbusiness.chron.com/impact-can-shrinkage-company-10159.html>
37. Karl-Heinz, S and Maessen, A. (2010) Profitability, International Journal of Management and Social Sciences Vol 2, No. 4.
38. Kimmons, R (2015) the disadvantages of a POS system. Viewed on 4 April 2015. Available At: http://www.ehow.com/list_6729611_disadvantages-point-sale-system.html
39. Kohne, C & Pekeur, S. W, (2014) Arabian Journal of Business and Management Review (OMAN Chapter) Vol. 3, No.11; June 2014
40. Geason, S & Wilson, R, P (ed.) (2011) Preventing retail crime, Australian instate of crime, Canberra, Australia
41. Langen, A, N, D (2011) Research design and Methodology. Viewed on 7 April 2015. Available at: www.ais.utm.my/researchportal/files/2015/02/Example3-Res-Design.pdf
42. Newman, A.J. & Cullen, P. (2010). Retailing: Environment and Operations. London: Thompson
43. NRF (2012) NRF Return Fraud Survey 2012, Washington, DC: National Retail Federation
44. Mamabolo, C, R, L (2010) Research design and methodology. Viewed on 7 April 2015. Available at: <http://uir.unisa.ac.za/bitstream/handle/10500/1962/04chapter3.pdf>
45. OECD (2012) OECD Internet Economy Outlook 2012, Paris: OECD.
46. Okwo, I, M and Ugwunta, D, O (2012) Impact of Firm's Input Costs on Firm Profitability: Evaluation of the Nigerian Brewery Industry Research Journal of Finance and Accounting Vol 3, No 6, 2012.
47. Passarella (2015) Retail Theft and Retail Shrinkage. Viewed on 25 March 2015. Available at: <http://www.jrrobertssecurity.com/security-news/security-crime-news0024.htm>
48. PcAmerica (2015) Reduce Shrinkage with a POS system. Viewed on 4 April 2015. Available At: <http://www.talkpos.com/141/reduce-shrinkage-with-a-pos-system-part-1-of-3/>

49. Roberts, J. R (2015) Retail Theft and Retail Shrinkage. Viewed on 25 March 2015. Available. At: <http://www.jrrobertssecurity.com/security-news/security-crime-news0024.htm>
50. Sakumaran, S (2010) Case Study on POS testing, Network systems and technology Pvt Ltd
51. Security HR (2012) Security Manager's Headaches – A Critical look at the challenges of Shoplifting to the security manager. Available at: <http://www.securityhr.co.uk/> accessed on 4 April 2015
52. Sennewald, C.A. & Christman, J.H. (2011).Shoplifting. Burlington: Butterworth-Heinemann
53. Sindhu, A (2012) Chapter 2: Research Methodology. Viewed on 7 April 2015. http://www.uir.unisa.ac.za/.../05Chap%204_Research%20methodology%20and%20d
54. Statistic South Africa (2011). Standard Industrial Classification of All Economic Activities. 6th edition.
55. Sullivan, J, M. (2010) How Much Are You Losing to “Paper Shrink?” Viewed on 4 April 2015. Available at:<http://lpportal.com/feature-articles/item/13-how-much-are-you-losing-to-%E2%80%9Cpaper-shrink>
56. Sumanta, D. (2012) International Journal of Management Research and Review Managing Retail Shrinkage Management: An Indian Experience July 2012/ Volume 2/Issue 7
57. Vissak, T (2010) Recommendations for Using the Case Study Method in International Business Research, the Qualitative Report Volume 15 Number 2 March 2010
58. Thomas, Y, P (2010) Research Methodology and Design. Viewed on 7 April 2015. [http://uir.unisa.ac.za/.../05Chap%204_Research%20methodology%](http://uir.unisa.ac.za/.../05Chap%204_Research%20methodology%20and%20d)
59. Tyco (2011). Electronic Article Surveillance from security to retail performance: Tyco Retail Solutions. Available at <http://www.adt.com/.../EAS-Guide.pdf?MOD=AJPERES>
60. Vonk, J (2014) Sampling. Viewed on 7 April 2015. Available at: www.jennifervonk.com/uploads/7/7/3/2/.../lecture_6_sampling.pdf
61. Williams, Y (2015) Stratified random sample. Viewed on 7 April 2015. Available at: <http://study.com/academy/lesson/stratified-random-sample-example-definition-quiz.html>