Understanding Acquisitive Crime through Collaborative Spatial Analysis of Burglary and Shoplifting

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Acknowledgements

Executive Summary

Although Leeds has mirrored national reductions in most crime types, burglary and shoplifting have not historically followed this trend, putting Leeds in an almost unique national position. The aim of this collaborative project was to draw together a large dataset of over 10 years police recorded crime data covering all cases of burglary and shoplifting across West Yorkshire. It would subsequently conduct a large-scale spatio-temporal data analysis – using a combination of crime, socio-demographic, and geospatial data – in an attempt to identify clusters and explain differences in the distribution of acquisitive crimes across cities in West Yorkshire. This quantitative analysis was to be complemented by interviews with key retail managers to better understand security measures and reporting behaviours with regard to shoplifting, hence mediating some of the problems with recorded crime statistics.

The intended impacts on policing were:

- A better understanding of the social and/or economic impacts on shoplifting in West Yorkshire. This understanding will help West Yorkshire Police to design initiatives to reduce shoplifting, or provide evidence that the problem is best addressed by other organisations (e.g. social services or the shops themselves).
- A clearer picture of how burglary patterns have varied over the past decade, and why West Yorkshire (or Leeds specifically) has traditionally shown high rates of burglary when compared to other similar cities. Again, this might point to policies that the Police can implement to reduce burglary, or might suggest that the problem requires action beyond the remit of the Police.
- A streamlined process for sharing data between the University and the Police, to encourage further projects of this type.

Key Findings:

- The project navigated a complex administrative process across two large organisations (the University of Leeds and West Yorkshire Police) to reconcile a data sharing agreements and to share data. Whilst this process took longer than expected, data were ultimately delivered. The process revealed useful information about practices in both organisations and will provide input into the follow-on N8 Policing Research Partnership.
- National shoplifting surveys suggest that there might be an increase in shoplifting, although the different surveys are occasionally inconsistent in their findings.
- Early results of the shoplifting survey implemented for this project suggest that there is a perceived change in both volume of shoplifting and the types of goods being targeted, although these are not yet conclusive.

Introduction

The study represents one strand of an ESRC funded Knowledge Exchange Opportunities Scheme (KEOS) project that sought to explore innovative models of research co-production and knowledge translation. The project was a collaboration between a team of researchers at the University of Leeds and West Yorkshire Police (WYP) together with the Office of the Police and Crime Commissioner for West Yorkshire.

Nationally, crime has shown substantial reductions in recent decades, as evidenced by both the Crime Survey for England and Wales (CSEW, formerly the British Crime Survey) and police recorded crime statistics. However, there are two volume crime types in particular that tend to show different trends and these have been chosen as the subject of this pilot: shoplifting and burglary.

Background - Shoplifting

From the mid-1990s, crime in England and Wales has generally shown substantial reductions as depicted in Figure 1. However, in recent years there is evidence that the volume of shoplifting has not shared in this decrease and some even some evidence of an increase. This section will briefly review the available evidence.
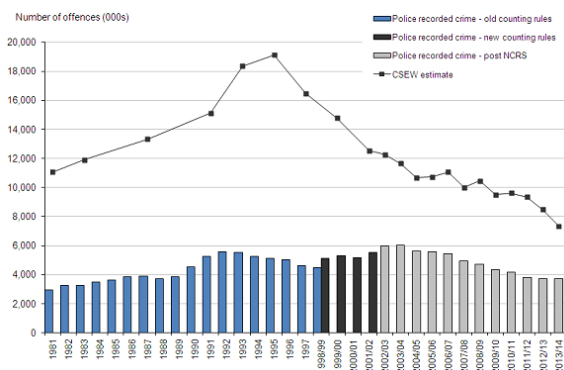

Figure 1. Trends in crime. Taken from ONS (2014).

The 2014 Retail Crime Survey (British Retail Consortium, 2015) is a yearly survey of retailers, covering 50% by store turnover (the actual sample size not reported). Key findings include:

- 698,184 recorded offences, extrapolated to approximately 3 million (the method of extrapolation is not defined).
- 552,069 "customer theft" (shoplifting) offences, extrapolated to 2.5M. This is a 4% reduction on the previous year, but still a large increase from 2010-11 onwards (see Figure 2).
- An Average theft value of £241, "the highest in a decade". It is not clear whether this takes inflation into account, but average growth rate in value is approximately 20%, suggesting growth even after inflation.
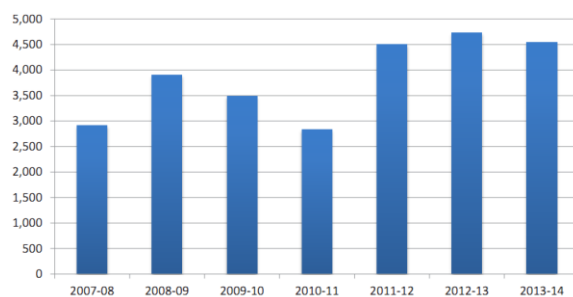- The "majority" of thefts are unreported.

Figure 2. Thefts per 100 stores. Source: British Retail Consortium (2015)

These results are interesting, but there are some important unanswered questions around the methodology that limit their reliability. For example, the sample size is not known. Furthermore, the motivations of the British Retail Consortium are unlikely to be neutral.

The Commercial Victimisation Survey (Home Office, 2014) has been collected in 1994, 2002 and 2012. It is based on 4,041 interviews with people on premises represented by a number of different types of industry. For the 'Wholesale and retail' industry, that is relevant here, there were 935 people interviewed, covering an estimated 340,000 businesses (0.275%). Generally, the interviewee was the person responsible for security and crime-related issues for the business.

The relevant key findings are:

- There was a fall in crime in the period 2013 - 2013, but it was not statistically significant
- Large retailers (those with 50 or more employees) experienced higher crime rates (177,699 per 1000 premises) than smaller retailers (fewer than 50 employees suffered 12,530 incidents per 1,000 premises).
- Most crimes suffered in the industry were theft (~80%).
- Reporting rates varied by the type of offence. Burglary reporting rates were relatively high (~80%) whereas thefts by customers, staff, or unknown people were much lower (42%, 31% and 33% respectively).

Finally, a major source of crime data is the ONS publication 'Crime in England and Wales' that collates police recorded crime data as well as results of the Crime Survey for England and Wales. The most recent data for year ending March 2014 suggest that there is a 7% increase in shoplifting compared with the previous year (see *Figure 3*). Furthermore:

> *Anecdotal evidence from police forces suggests that this rise is likely to be a result of a genuine increase in crime rather than any change in recording practice. (ONS, 2014)*

This increase also matches increases in shoplifting prosecutions in the criminal justice system[1]. Furthermore, this number of offences recorded by the police is the highest since the introduction of the National Crime Recording Standard in 2002/03 (ONS, 2014) and does not follow downward trends in other theft offences.

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[1] For Ministry of Justice reports documenting the increase in shoplifting prosecutions, see: https://www.gov.uk/government/statistics/criminal-justice-statistics-quarterly-december-2013
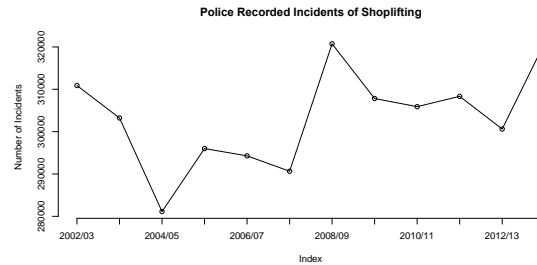

Figure 3. The number of incidents of shoplifting recorded nationally by the Police (ONS, 2014)

However, it is also important to note that the ONS recognise that shoplifting has low reporting rates and there are "challenges in interpreting trends in police recorded shoplifting" (ONS, 2014).

The following summarises the apparent trends in the number of incidents estimated by the three different surveys:

- The Retail Crime Survey (implemented by the British Retail Consortium) found that crimes against retailers increased from 612,819 incidents in 2011/12 to 631,391 in 2012/13 (British Retail Consortium, 2015).
- Police recorded crime statistics point to an increase in shoplifting: 302,245 offences in 2011/12 to 313,693 in 2012/13 (Office for National Statistics, 2014).
- The Commercial Victimisation Survey found a decrease in theft, although it was not statistically significant. It should, however, be noted that the CVS surveys wholesalers as well as retailers (Home Office, 2014).

In addition, some anecdotal evidence points to a rise in shoplifting as a result of the recession (Gentleman, 2014), although this is tenuous. Overall, therefore, it is likely that shoplifting has either increased, or is stable where other crime types are decreasing. Three possible explanations are provided by the ONS (2014) for the apparent increase:

1. shops are more frequently reporting crimes to the police;

2. police recording practices have changed (although there is no evidence for this);
3. the real amount of shoplifting has increased.

In effect, the main aim of this project was to look for empirical evidence in West Yorkshire to determine which of the three above are responsible for the apparent increases in recorded shoplifting, and if (3) is the most likely, then try to explain why. The quantitative parts of the research will be supplemented by interviews with shop managers to gain an insight into their practice of managing and reporting shoplifting.

Background - Burglary

Although both the Crime Survey for England and Wales (CSEW) and police data suggest that burglary rates have been falling from a peak in the early 1990s, as illustrated by Figure 4, West Yorkshire (and Leeds in particular) has not traditionally shared in this reduction; although there is recent good news in that burglary rates do seem to be falling faster than national rates. The challenges here were to identify why burglary has traditionally contradicted national trends in Leeds, whether this is reflected in West Yorkshire as a whole, and to use volume recorded burglary data to identify what some of the main reasons for these unusual patterns might be.
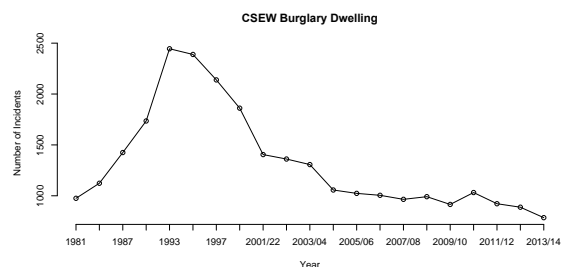

Figure 4. The number of incidents of Burglary Dwelling as recorded by the Crime Survey for England and Wales 2013/14 (ONS, 2014).

Methods and Data Collection

At its inception, the project planned to have completed the transfer of data from West Yorkshire Police to the University by January 2015.

Unfortunately, there were some difficulties and as a result the transfer was not completed until October 2015. This limited the amount of time that could be devoted to quantitative analysis (the major strand activity). However, the process was a useful one; the implications of which are discussed below.

Although this strand has not produced useful empirical findings at this stage, it is important to note the the research will continue regardless. The immediate next steps are:
1. Implement the full shoplifting survey (discussed below)
2. First-pass over the data to identify inconsistencies and/or potential errors, particularly with regards to spatial coordinates and temporal accuracy.
3. Descriptive analysis to exhibit how the spatial and temporal patterns in burglary and shoplifting in West Yorkshire have changed over time.
4. Building on the descriptive analysis, the research will identify one or two case studies for both burglary and shoplifting that attempt to explain how the underlying mechanisms that influence crime are changing (e.g. social / economic changes) and where particular crime reduction initiatives have had (or are having) an impact.

The Shoplifting Survey

In order to identify the most useful outcomes of the shoplifting work, the project steering group were asked to discuss what the most pertinent questions to WYP were. The group identified a number of interesting areas, three of which were seen as achievable here. Table 1, below, outlines the observations of the steering committee. The activities that were achievable under this project are:
- Drivers;
- Reporting; and
- Displacement.

The quantitative analysis will help to shed light on displacement (through spatio-temporal analysis) and drivers (by exploring the types of goods that

that businesses can use to share information about current shoplifting events.

Steering committee observation	Project action
Drivers. There is a working hypothesis that it is driven by austerity, whereas the historical driver was drug use. Can we identify changes in stolen goods that point to a change in motivation? E.g. nappies and vegitables (austerity) v.s. coffee, meat, knives (drugs).	This point gets to the core aims of this part of the project. The survey will include a question to identify whether the interviewee is aware of changes in the types of things being stolen
Shopkeeper appetite for risk. Placing high value goods near the entrance attracts customers into a store, but they are also in a prime location for a quick 'grab and run' theft (i.e. 'designing in' crime). What about 'designing out' crime in store design	Although interesting and relevant, questions on this topic are probably too far from the core aims of the research and run the risk of over-complicating the survey
Reporting. How much shoplifting goes unreported? Do shopkeepers have internal thresholds? Does a new person have lower thresholds and report absolutely everything	Also very relevant. A question will be included that attempts to glean information about reporting practices.
Security incentives. Are there perverse incentives to allow shoplifting – e.g. performance related pay for security guards? Makes people less likely to deter a shoplifter and catch them in the act instead.	Although interesting, this is also probably too far removed from the main aims.
Displacement. Is there displacement of shoplifting from city centres (where there is CCTV and higher staffing levels) to e.g. out of town mini markets which don't have CCTV and have lower staff levels?	This survey will only be delivered to city centre shops, but the volume crime data might offer some insight into displacement.

have been reported to have been stolen). However, to better understand a shopkeeper's attitude to security and their propensity to report burglary, a survey is being undertaken.

The survey is being delivered by street marshals working for Business Against Crime in Leeds (BACIL[2]). BACIL is an organisation who work with WYP and Leeds City Council, among others, to support a network of businesses in their efforts to reduce business related crime. One of the main initiatives is a set of radios and a private web site

The survey has been included in Appendix A. It begins with questions about the specific store, including its type, using the same categories as

those in the Retail Crime Survey:
- Supermarkets (food & drink)
- Chemists, health care and beauty
- Clothing
- Department stores
- DIY and Hardware
- Fast Food
- Jewellery
- Mixed retailer (other)

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[2] BACIL website: http://bacil.org/

It also asks for some details about the interviewee in order to ascertain how experienced they are in security/theft related matters. The main survey then requests information about:

- whether the interviewee has perceived a change in the amount of shoplifting over the last five years;
- what types of goods have traditionally been stolen and whether that has changed;
- how often they detect and report shoplifting; and
- whether they perceive the characteristics of *shoplifters* as having changed.

At the time of writing a pilot has been distributed to five stores and returned. The full survey will be implemented shortly with the help of BACIL.

Conclusion – Implications for Data Sharing

As discussed, due to delays in the delivery of data to the University, the quantitative analysis areas of the project were not completed. However, it is important to note that the data have been delivered. This is a considerable achievement; both the University and WYP are large organisations with complex data processing and security infrastructure requirements. Having navigated a number of different data sharing agreements, the project (as with similar forthcoming collaborative projects) is in a stronger position to collaborate in the future. In particular, the documents and processes uncovered will be form an invaluable part of the new N8 Policing Research Partnership. One of the aims of the Partnership is to create a data 'clearing house' that will develop standardised frameworks for data sharing and collaboration. The implications of this project will be extremely useful in the future.

In the meantime, the shoplifting survey will continue to be implemented and the quantitative analysis can begin in earnest.

References

British Retail Consortium (2015). *BRC Retail Crime Survey 2014*. Technical report.

Gentleman, A. (2014). Rise in female shoplifters linked to benefit cuts, say police. *The Guardian*. Published Thursday 23 January 2014.

Home Office (2014). Crime against businesses: detailed findings from the 2013 Commercial Victimisation

Survey. Technical report, London.

Office for National Statistics (ONS) (2014). *Crime in England and Wales, Year Ending March 2014*. London: ONS

Appendix A: Shoplifting Survey

Project Title:
An Exploratory Knowledge Exchange Platform for Policing

UNIVERSITY OF LEEDS

Background Information – Store

Store Name	
Store Address	
Type of Store	☐ Supermarkets (food & drink) ☐ Chemists, health care and beauty ☐ Clothing ☐ Department stores ☐ DIY and Hardware ☐ Fast Food ☐ Jewellery ☐ Mixed retailer (other)

Background Information – Interviewee

Name (*Optional*)	
Telephone number (*Optional*)	
Role / Job Title	
Length of Time in Current Job	_____ Years _____ Months

Main Survey

1. Changes in the amount of shoplifting
In your experience, has the amount of shoplifting changed in the last 5 years?

☐ Yes	☐ No

If yes: How much more or less shoplifting is there now?

☐ <50% less than half	☐ <25% less than a quarter	☐ 0% no change	☐ >25% more than a quarter	☐ >50% more than half

2. Stolen goods
What kinds of things are people stealing now?

Have people recently started trying to shoplift different types of goods than they have done in the past?

☐ Yes	☐ No

If yes: What types of things *were* people stealing that they're not stealing now?

3. Detecting shoplifting

How much customer theft do you think that you detect?

☐ 0% none	☐ 25%	☐ 50% half of it	☐☐ 75%	☐ 100% all of it

When you do catch someone shoplifting, how often do you report this to the Police?

☐ 0% never	☐ 25%	☐ 50% half of the time	☐☐ 75%	☐☐ 100% always

4. Shoplifters

Do you think that the type of shoplifter has changed?

☐ Yes	☐☐ No

If yes: How has the type of shoplifter changed?

What percentage do you think are regular/repeat shoplifters?

☐☐ 0% none	☐ 25%	☐ 50% half of them	☐☐ 75%	☐☐ 100% all of them