



# Estimating the true scale of shop theft in Nottingham and other Core Cities

## Using the Commercial Victimisation Survey

Dr. Laura Garius and Dr. James Hunter

Crime Survey Users Conference, RSS 8<sup>th</sup> December 2017

 @ShopTheftRisk

NOTTINGHAM  
TRENT UNIVERSITY

 Quantitative and  
Spatial Criminology  
Research Group

Nottingham  
Crime & Drugs Partnership  
Working together to reduce crime, disorder & the misuse  
of drugs and alcohol

Innovate UK  
Technology Strategy Board

E·S·R·C  
ECONOMIC  
& SOCIAL  
RESEARCH  
COUNCIL





- Nottingham **£24million/annum**
- Between 2009 and 2014 there were **18,725** officially recorded incidents of shop theft in Nottingham
- NCDP **estimates that this only accounts for around 12%** of all shop theft occurrences in the City
- Receives **little attention**

# PROJECT


## *aims*

To estimate the true level of shop theft

To better understand prolific shop theft offenders' motivation and modus operandi

To identify the neighbourhoods where shop theft offenders live and their distance travelled to crime

Risk of shop theft by retail sector at neighbourhood level



“I can honestly say I  
have gotten away with  
thousands and  
thousands of shoplifts,  
**thousands**”

Participant 1 (Prolific Nottingham Shoplifter on IOM  
Probation Scheme)



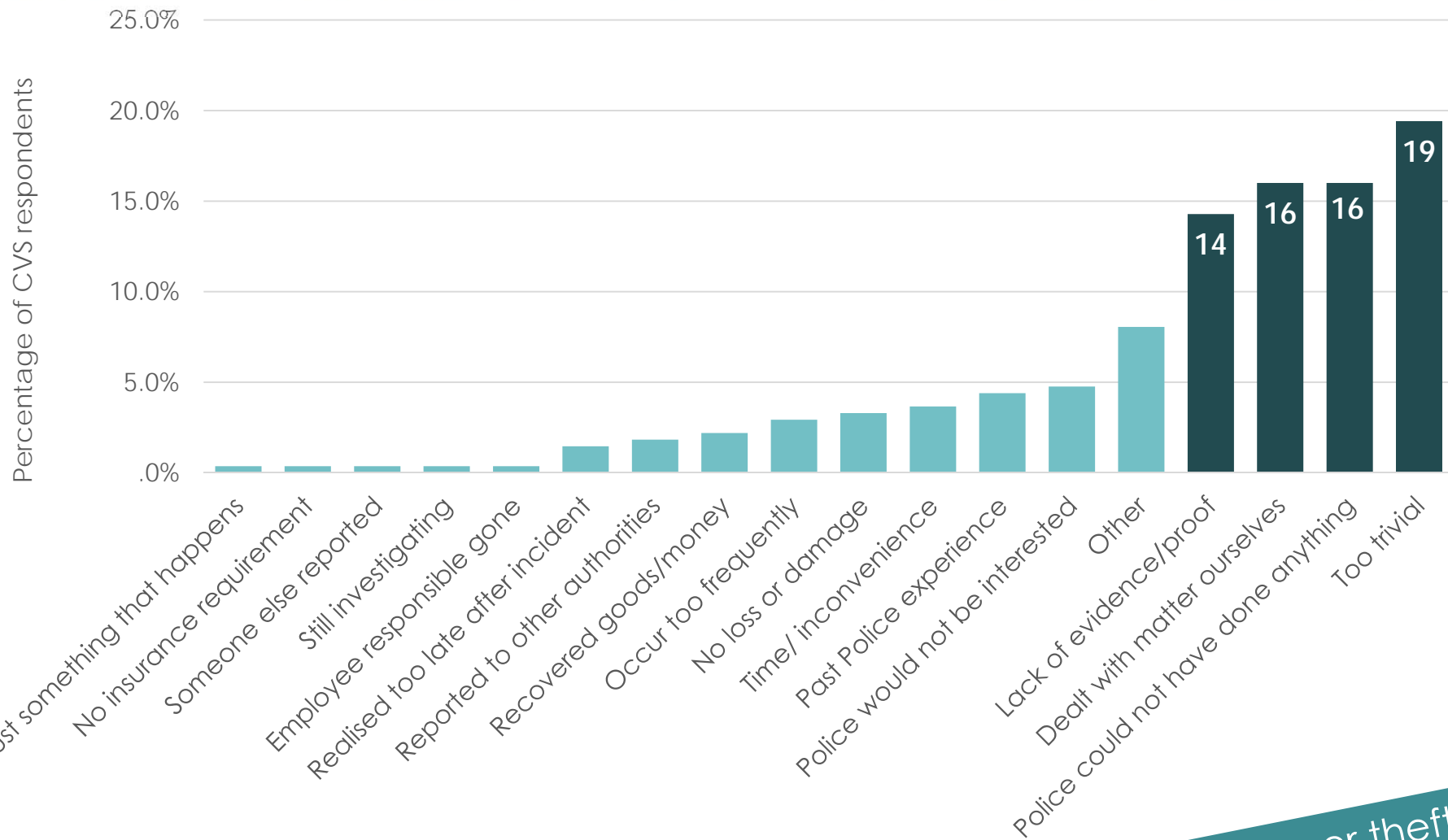


"A large supermarket chain in Australia discovered that it had **sold more carrots than it had in stock**...similarly, an English supermarket has discovered that its customers are transacting carrots at an incredible and improbable volume"

# changing ENVIRONMENT

Taylor, E., 2016. Supermarket self-checkouts and retail theft: The curious case of the SWIPERS. *Criminology & Criminal Justice*, 16(5), pp.552-567.

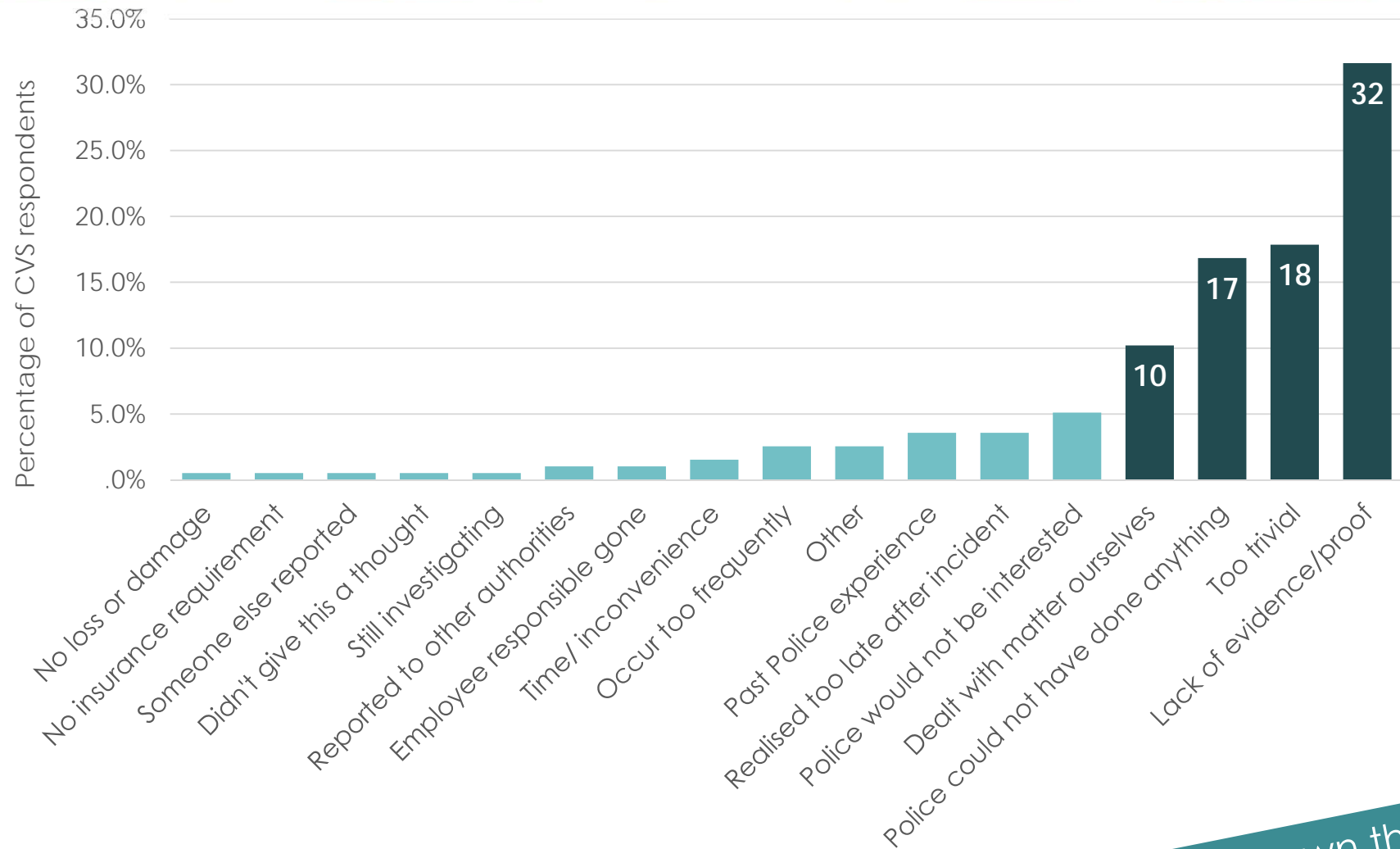
# why do retailers not report?



customer theft



# why do retailers not report?




unknown theft

A photograph of three large, jagged icebergs floating in a deep blue ocean under a clear blue sky. The icebergs are white and have sharp, rocky edges. The water is dark blue with some whitecaps. The sky is a solid, bright blue.

# *dark* FIGURE

- Changing retail environment
- Lack of retailer reporting
- Onus placed on retailer
- Contemporary shift to a harm reduction approach by police
- A 'hidden crime'





Evaluation of shop theft trends using Commercial  
Victimisation Survey (CVS) across different vertical retail  
sectors

Identification of the hidden level of shop theft through  
application of CVS trends onto different retail sectors at  
local authority level

*estimating the true scale of shop theft*

---

# Commercial Victimisation Survey CVS

## CVS

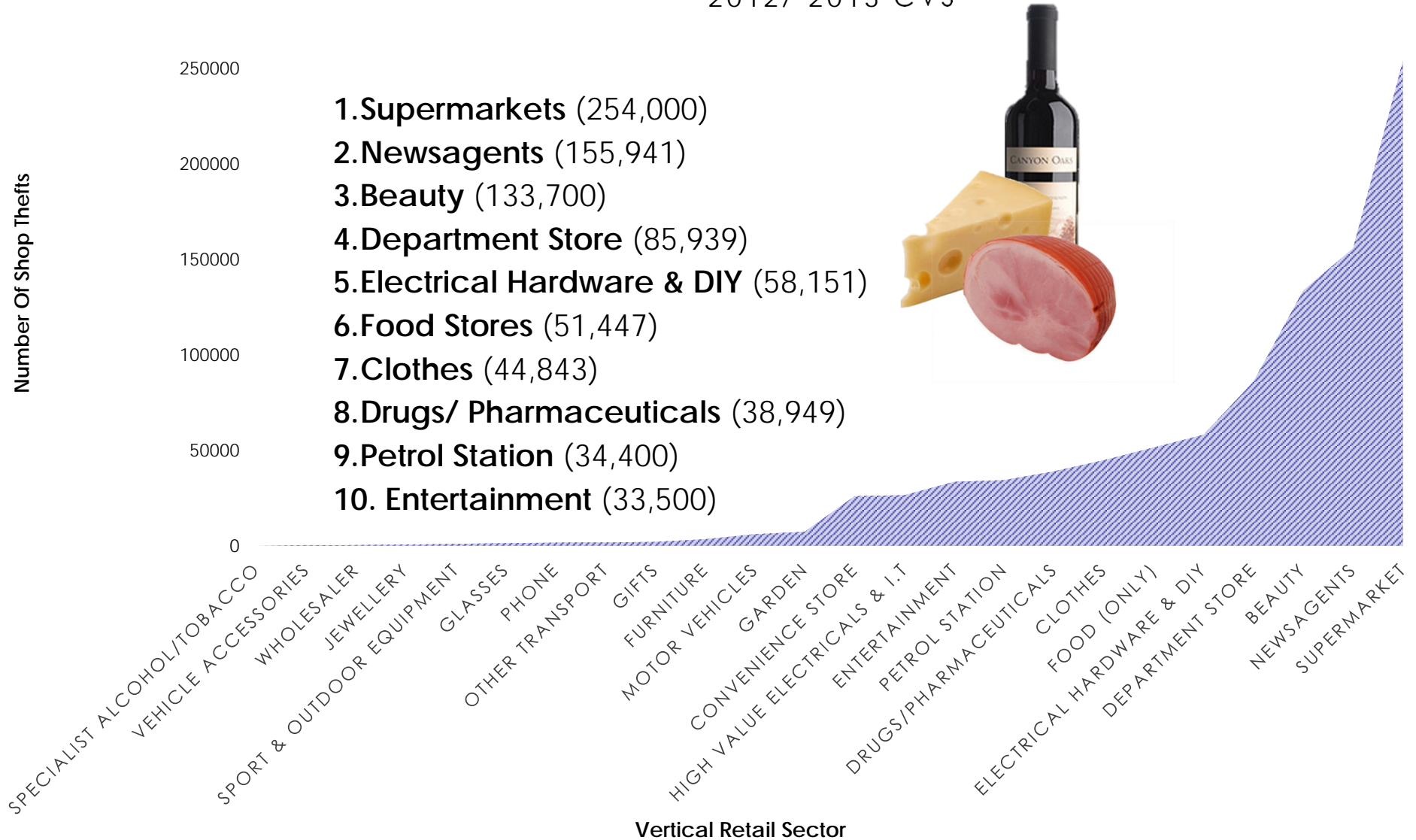
- Home Office Victim Survey;
- Crimes Against Businesses;
- Experiences in previous 12 months;
- Four Sectors;
- G] Retail/ Wholesale;
- Telephone Survey;
- Representative sample 4,000 businesses;
- Sweeps: 1994, 2002, annually post 2012

## Strengths

- 'Dark figure of unrecorded crime';
- Evidence gap (National Statistician Review, 2011);
- Investigates police reporting behaviour;
- Explores nature of business crime



# Theft Incidence (Crimes Per 1,000 Vertical Sector Businesses) 2012/ 2013 CVS



# methodology

Nomis UK Business Counts [UBC] Data: Counts businesses in each vertical retail sector for every core city

Weighting theft rates per 1,000 sector businesses (nationwide) to the number of sector businesses present in each of the core cities in 2013

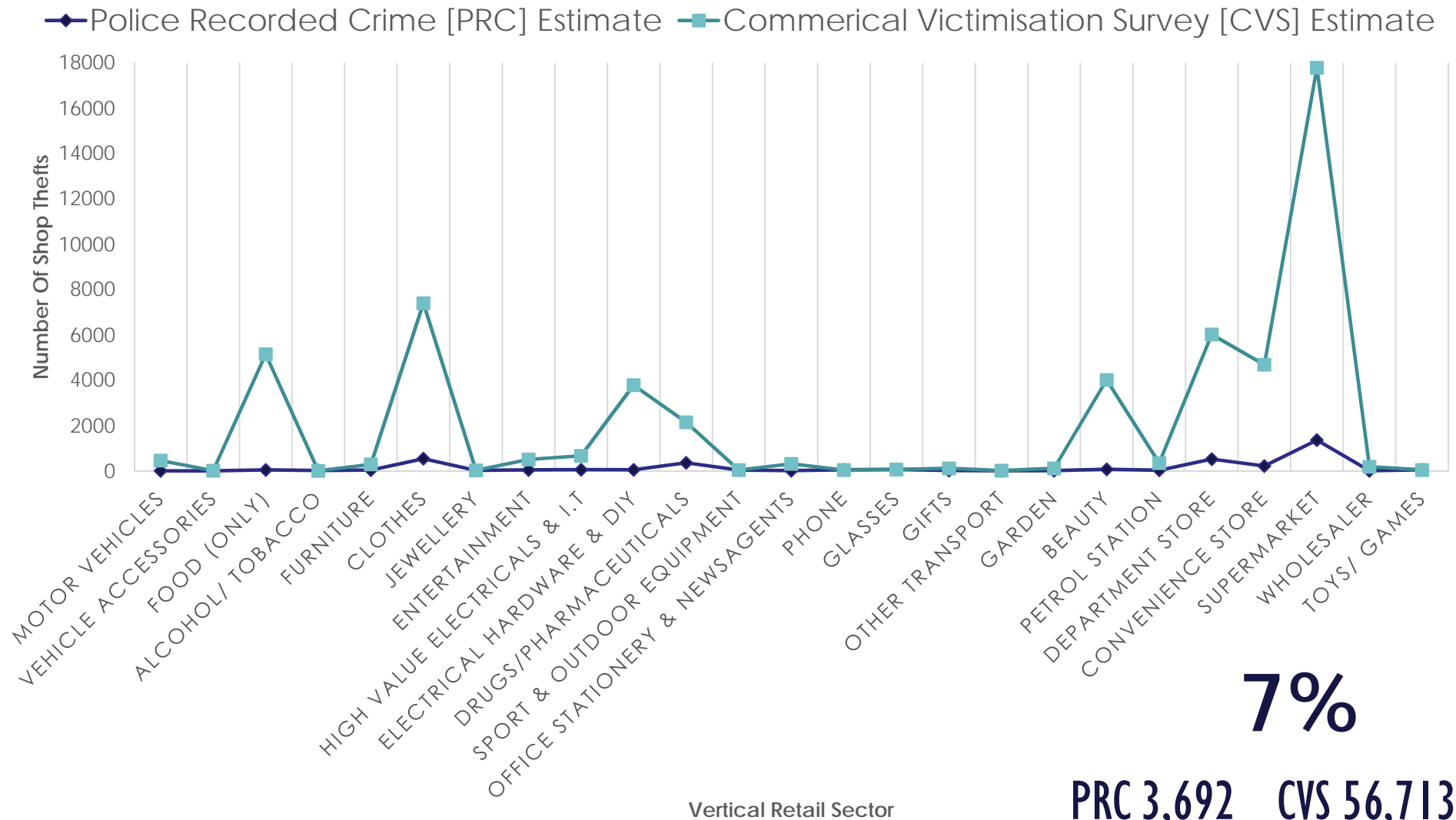
Drop the CVS estimates (by vertical sector) onto the existing Police [PRC] Data for the same time period (2013)

City-specific comparisons between the number of recorded shop thefts occurring in a city and the number of shop thefts predicted by the CVS to have actually occurred

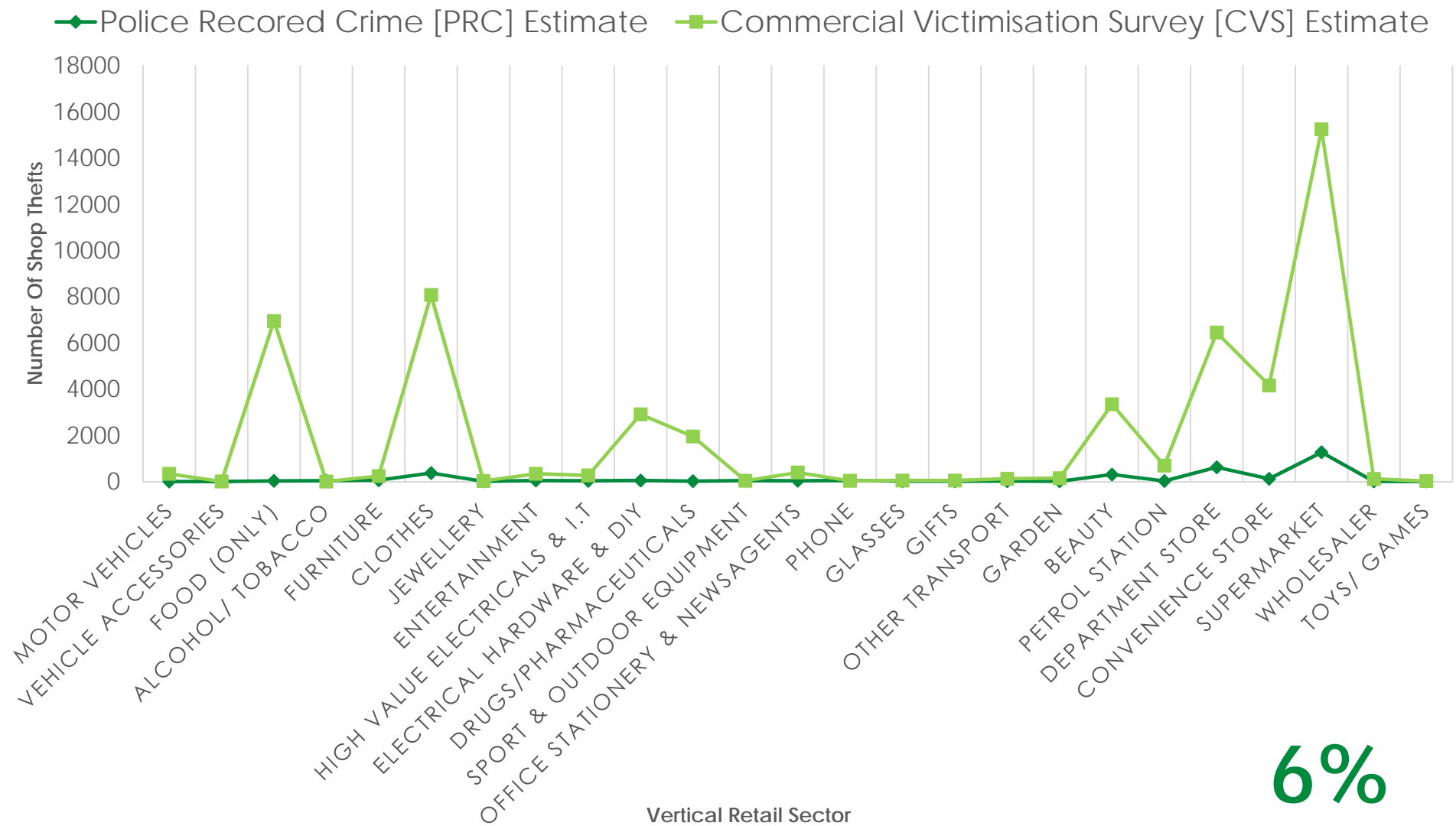
An overall percentage of police reporting for each core city & unique reporting patterns for the different vertical retail sectors



## True Estimate Of Shop Theft In Core City A (2013) By Vertical Retail Sector



## True Estimate Of Shop Theft In Core City B (2013) By Vertical Retail Sector

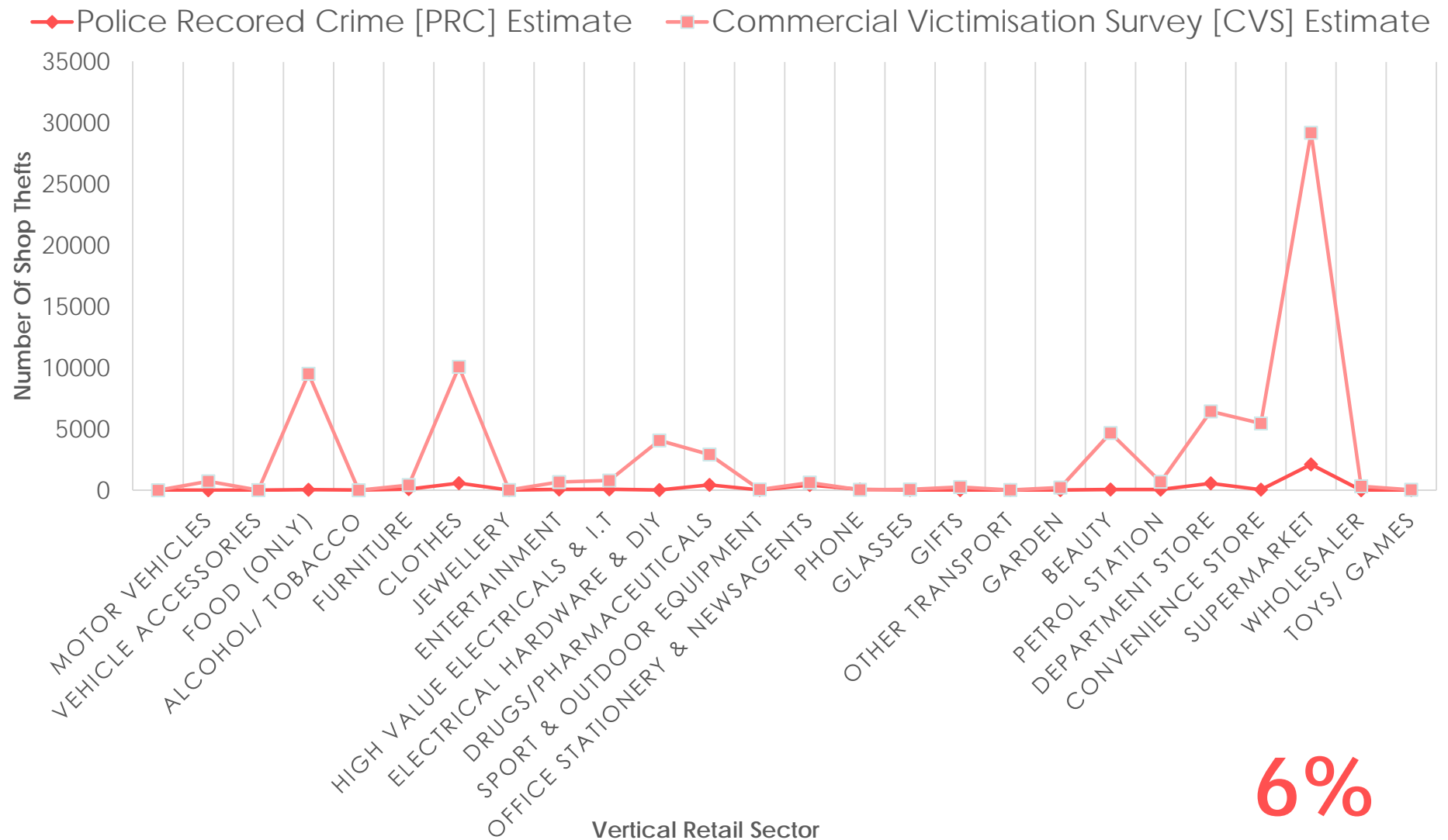


6%

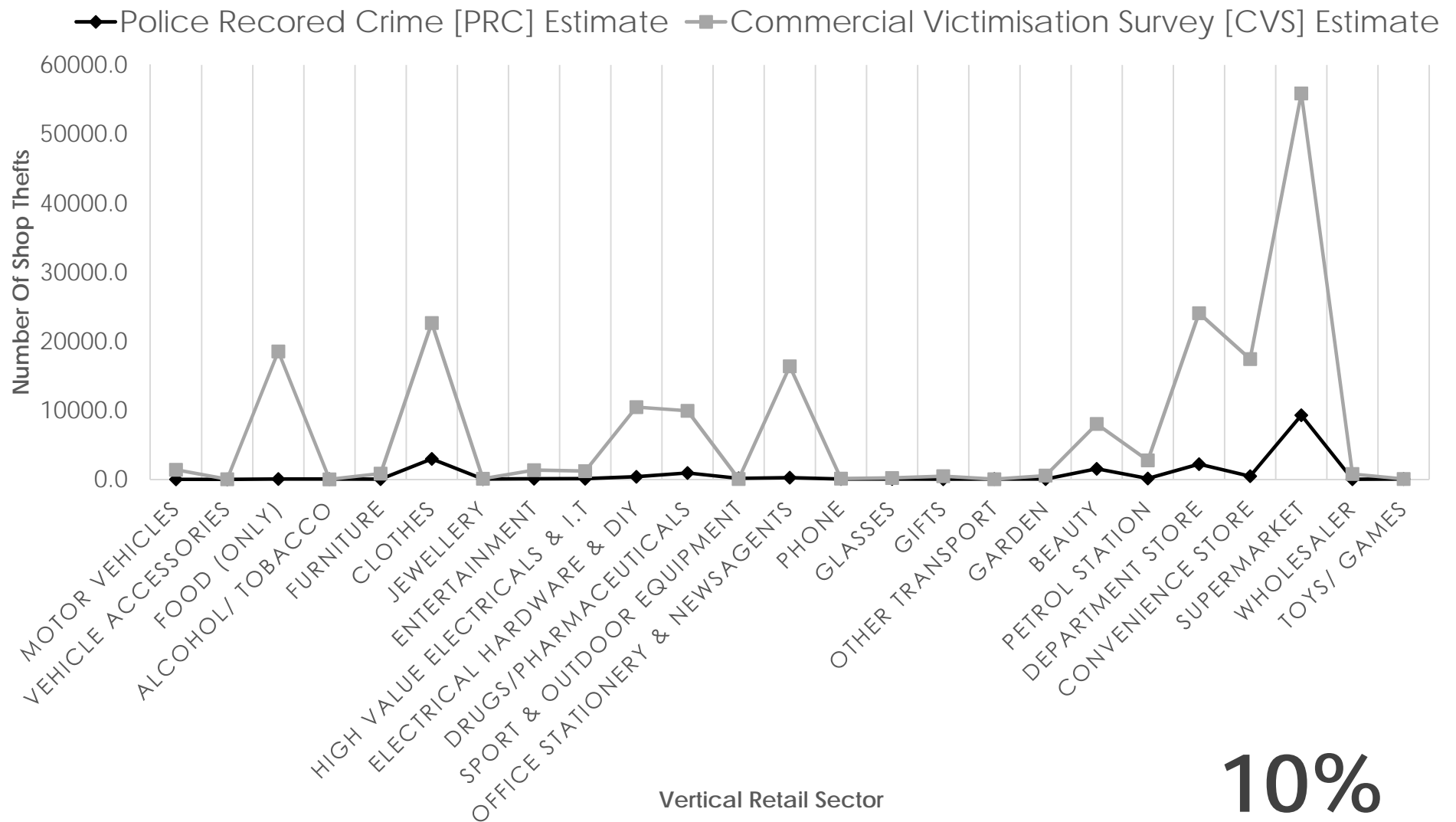




## True Estimate Of Shop Theft In Core City C (2013) By Vertical Retail Sector



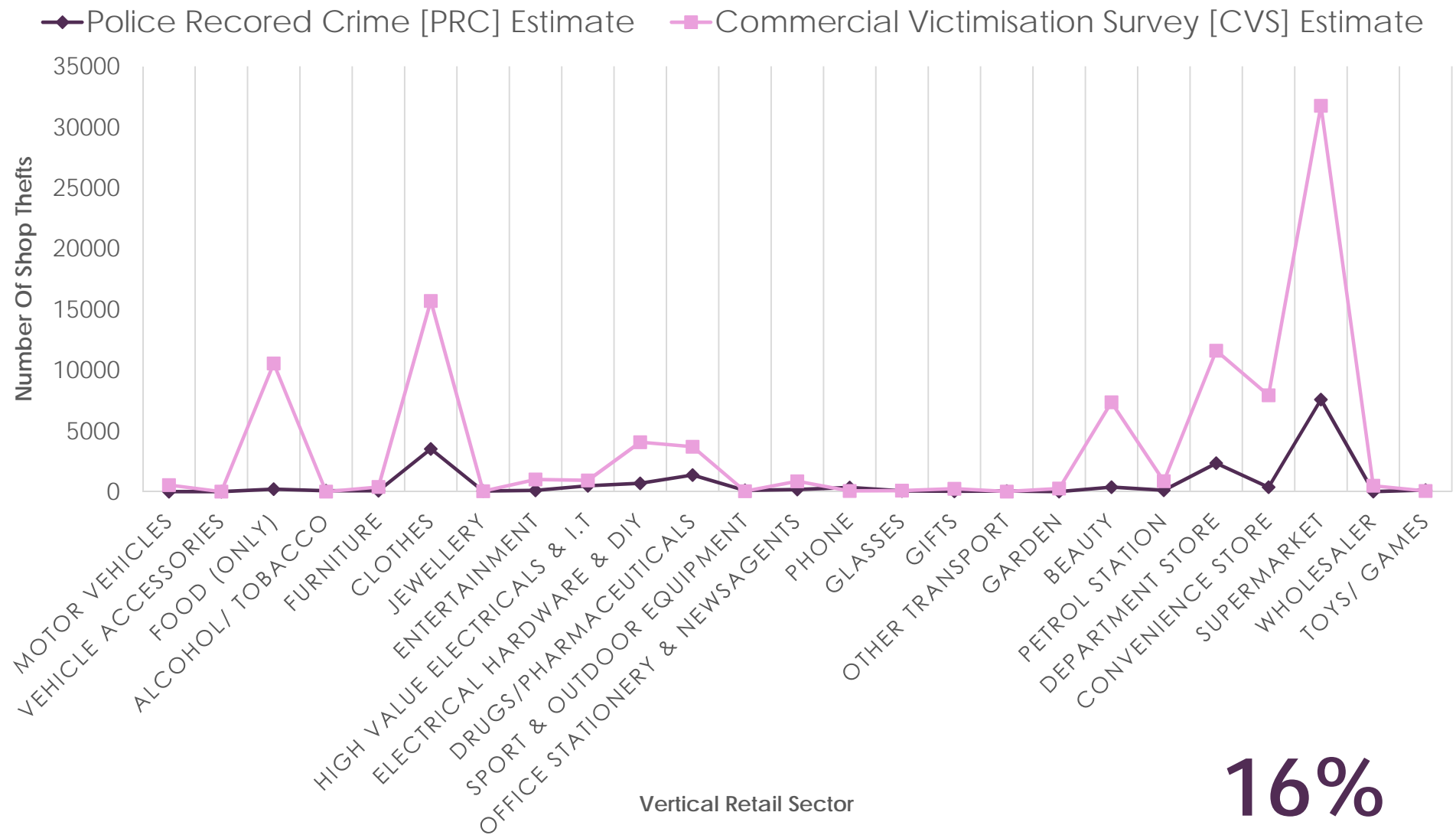
## True Estimate Of Shop Theft In Core City D (2013) By Vertical Retail Sector



10%



## True Estimate Of Shop Theft In Core City E (2013) By Vertical Retail Sector



16%



# harmonising **RETAIL SECTORS**

CVS multiple response variable: 'what does your business mainly sell?'

PRC open qualitative data field to manually enter premise name

Nomis UBC/ POI established, *detailed* vertical retail sectors

# Commercial Victimisation Survey CVS

## Limitations

- Premise name;
- Limited internal information;
- Premises residency <12 months;
- Multiple response vertical retail sectors;
- Aligning with PRC/ UBC/ POI data
- 'Most recent incident...';
- 'Presence of security measures' (question phrasing *prohibited* SPF analysis conducted by research team in relation to other crime types including burglary) - now changed
- Geocoding availability to facilitate LSOA-level analysis



The background of the slide features a close-up, slightly blurred image of a pair of black-rimmed glasses resting on an open map. The map shows various geographical features and text, though it is not the primary focus. The overall tone is academic and professional.

# *alternative* **APPROACH**

An **alternative** approach to estimating shop theft at the city and neighbourhood level

Police recorded (**PRC**) shop theft data;

Spatially weighted regression modelling of **geographical variations** in police recorded shop theft at the LSOA level;

Retail structure plus contextual neighbourhood characteristics;

Use of **predicted levels** of shop theft from model as alternative estimate;

Modelling identifies (a) **higher** incidence of predicted shop theft overall; and (b) presence of shop theft in neighbourhoods **not identified** within police recorded crime data



# FUTURE steps

## Examining Push and Pull Factors

- **Push** factors e.g. neighbourhood-level characteristics (deprivation/ education/employment) and socio-demographic characteristics
- **Pull** factors e.g. collective efficacy, vertical retail sector, security levels, transport availability
- **Contagion** whether certain types of retailer generate the potential for shop theft to be *displaced* to neighbouring premises (offender specialists/ generalists)



# QUESTIONS?

Thank you for listening!

Dr. Laura Garius

[laura.garius@ntu.ac.uk](mailto:laura.garius@ntu.ac.uk)

Dr. James Hunter

[james.hunter@ntu.ac.uk](mailto:james.hunter@ntu.ac.uk)